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THE UNIVERSITY OF MINNESOTA

BULLETIN

Vol. 2. MAY 15, 1899. No. 6

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The College of Homeopathic Medicine and Surgery.

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MINNEAPOLIS, MINN.

The University Bulletins are published by authority of the Board of Regents, six times a year,—every six weeks during the University year. Bulletins will be sent gratuitously, postage paid, to all persons who apply for them. In calling for bulletins, please state department of the University concerning which you desire information. Address

THE REGISTRAR,
The University of Minnesota,
Minnepolis, Minn.

The University

THE UNIVERSITY OF MINNESOTA comprises the following named colleges, schools and departments:

THE GRADUATE DEPARTMENT.

THE COLLEGE OF SCIENCE, LITERATURE AND THE ARTS.

The School of Technical and Applied Chemistry.

THE COLLEGE OF ENGINEERING AND THE MECHANIC ARTS.

THE SCHOOL OF MINES.

THE COLLEGE OF AGRICULTURE.

The School of Agriculture.

The Dairy School.

THE COLLEGE OF LAW.

THE DEPARTMENT OF MEDICINE, composed of colleges as follows :

The College of Medicine and Surgery.

The College of Homeopathic Medicine and Surgery.

The College of Dentistry.

The College of Pharmacy.

The Regents of the University have also entrusted to their charge

THE EXPERIMENT STATION ;

THE GEOLOGICAL AND NATURAL HISTORY SURVEY.

Catalogues of any department sent free to any address, upon application. The full catalogue will be sent only upon receipt of ten cents to cover postage. Address,

THE REGISTRAR,
University of Minnesota,
Minneapolis. Minn,

Medical Hall.

Board of Regents

The HON. JOHN S. PILLSBURY, MINNEAPOLIS, - - - *Regent for Life*

The HON. JOHN LIND, NEW ULM, - - - - - - - *Ex-Officio*
The Governor of the State.

CYRUS NORTHROP, LL. D., MINNEAPOLIS, - - - - - *Ex-Officio*
The President of the University.

The HON. JOHN H. LEWIS, B. A., HASTINGS, - - - - *Ex-Officio*
The State Superintendent of Public Instruction.

The HON. STEPHEN MAHONEY, B. A., MINNEAPOLIS, - - - - 1901

The HON. SIDNEY M. OWEN, MINNEAPOLIS, - - - - - 1901

The HON. ALPHONSO BARTO, ST. CLOUD, - - - - - - 1902

The HON. THOMAS WILSON, ST. PAUL, - - - - . - 1902

The HON. WILLIAM M. LIGGETT, BENSON, - - - - - 1903

The HON. A. E. RICE, WILLMAR, - - - - - - - 1903

The HON. ELMER E. ADAMS, B. A., FERGUS FALLS, - - - - 1903

The HON. GREENLEAF CLARK, M. A., ST. PAUL, - - - - 1904

The REV. SAMUEL G. SMITH, D. D., ST. PAUL, - - - - - 1904

OFFICERS.

The HON. JOHN S. PILLSBURY, *President.*

PRESIDENT CYRUS NORTHROP, LL. D., *Corresponding Secretary.*

STEPHEN MAHONEY, B. A., *Recording Secretary.*

JOSEPH E. WARE, *Treasurer.*
(St. Anthony Falls Bank.)

Calendar for 1899-1900.

1899. 1900.

JULY.

S.	M.	T.	W.	T.	F.	S.
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The Department of Medicine

THE DEPARTMENT OF MEDICINE INCLUDES THE FOLLOWING NAMED COLLEGES:

The College of Medicine and Surgery.
The College of Homeopathic Medicine and Surgery.
The College of Dentistry.
The College of Pharmacy.

Each college is distinct in the government of its internal affairs, has its own faculty and an independent curriculum, excepting in the studies of anatomy, physiology, chemistry, histology and embryology. These studies, so far as they are required in each course, are pursued by all the students of the department in common.

BUILDINGS AND EQUIPMENT.

The department is resident in three buildings situated upon the University campus, viz: medical hall, the laboratory of medical sciences and the laboratory of chemistry.

Medical hall contains the offices of the deans of the college of medicine and surgery, of the college of homeopathic medicine and surgery and of the college of dentistry; the large amphitheatre and lecture-rooms of the several colleges; the library and reading-room of the department; the dissecting-rooms and laboratories of anatomy; the operating-rooms and laboratories of dentistry; the dental infirmary and a division of the university free dispensary.

The laboratory of medical sciences is a building especially designed for laboratory uses. One wing of the building is occupied by the college of pharmacy and the department of physiology. It contains the office and private laboratory of the dean of the college of pharmacy, the pharmaceutical and botanical laboratories, the laboratory of organic chemistry, with preparation and stock rooms. A large lecture amphitheatre, especially arranged for demonstrative work, the laboratories of physiology, physiological chemistry, practical dietetics and operative surgery are also situated in this wing.

The center and opposite wing are occupied by the department of histology and embryology, pathology and bacteriology. Each of these branches has its well-lighted laboratories, preparation rooms and private study rooms.

Upon the basement floors are the laboratory stock-rooms and animal rooms devoted to physiological and bacteriological purposes.

A large laboratory upon the first floor is assigned to the bacteriological work of the State Board of Health.

The laboratory of chemistry is a one-story brick building devoted entirely to the uses of this department. It is equipped with laboratories, preparation-rooms, store-rooms, and the private offices of the professor of chemistry.

The department of medicine is in intimate relationship, through its several faculties, with the hospitals, infirmaries and dispensaries of the cities of Minneapolis and St. Paul. Through these agencies it utilizes, for the benefit of its students, the clinical material of these two large centers of population. The location of the University near the interurban car line enhances the value and convenience of these clinical opportunities.

A medical library, containing some two thousand volumes and supplied with current periodicals, is open to all the students of the department. The collection has been chosen with special regard to the need for reference work and collateral reading. The general library of the University and the public libraries of Minneapolis and St. Paul are also open to the students of this department.

The College of Homeopathic Medicine and Surgery.

RULES AND REGULATIONS OF THE DEPARTMENT.

COLLEGE YEAR.

The twelfth annual course of study in this department will begin on September 20th, 1899 and will continue eight and one-half months, closing upon the first Thursday in June, 1900. The college of dentistry, in this department, will begin work September 5th and the college of pharmacy October 3rd.

The college year is divided into semesters; the first semester ending January 27th, 1900. The succeeding week will be devoted to mid-year examinations which will be conducted in many of the departments. The second semester will begin February 6th, 1900, and will close May 19th, 1900, when the final examinations of the year will begin. Commencement exercises will occur, in common with the other departments of the University, during the week ending June 7th, 1900.

ENROLLMENT.

It is desirable that students matriculate before September 12th.

Students will be assigned seats in the order of and at the time of their matriculation. Such matriculation and assignment of seats will be had in the office of the registrar of the University. Students will then present themselves for entrance examination, or for the approval of their evidences of preliminary qualification, to a committee of the college of science, literature and the arts appointed for this purpose. Having received an entrance certificate from this committee they will report to the dean of the college which they desire to enter, for admission and classification. They will then be furnished with a record of their standing and of the studies to be taken and they will be required to present this record to the professors in charge of such studies within the first week of the term.

ENTRANCE EXAMINATIONS.

In accordance with an agreement between the University of Minnesota and Hamline University, the requirements for admission to their medical departments, which represent all the medical schools of the state, are uniform.

Candidates who present a diploma of a reputable college, or of a high school of the first grade, or of the advanced course of a Minnesota State Normal School, or of the preparatory departments of either Hamline University or Carleton College, or of Pillsbury Academy, or of the Minneapolis Academy, will be admitted without examination. The diploma must, however, in every case, represent at least one year of latin.

Candidates who do not possess such qualifications will be required to pass an entrance examination which will be conducted by an examining board, consisting of three members of the faculty of the college of science, literature and the arts, appointed by the president of the University.

For the ensuing year the requirements of this examination will be:

1. An English composition of not less than two hundred words, upon a subject to be announced at the time of examination.
2. Elementary algebra.
3. Physics.
4. Latin: grammar and easy prose; three books of Cæsar.
5. United States history.
6. Physiology.
7. Plane geometry.

In 1900, the requirements will be those for admission to the freshman class of the college of science, literature and the arts.

CONDITIONS.

Examinations of conditioned students and of applicants for advanced standing, in the common studies of the first and second years, will be held in these branches, upon the following dates:

September 20, 9 a. m. Anatomy, first year; Physiology, second year.
September 20, 2 p. m. Histology, first year; Chemistry, second year.
September 21, 9 a. m. Physiology, first year; Anatomy, second year.
September 21, 2 p. m. Chemistry, first year; Histology, second year.

Conditions may also be removed at the close of each semester.

Candidates for graduation who carry conditions in studies of previous years must remove these conditions at the end of the first semester in order to be eligible for final examinations.

CLASSIFICATION.

September 23rd and 25th will be devoted to the classification of students. The opening lectures of the course will be delivered at 8 p. m., September 25th.

STANDING.

The standing of students is determined by the results of recitations, written examinations and laboratory work. It is indicated by the terms "passed with excellence," "passed" or "conditioned." In the four common branches, the term "passed with excellence" will exempt its recipient from final examination.

A student whose term work is sufficiently satisfactory may, at the discretion of each professor, be awarded a standing of "passed" without a final examination. "Conditions may be removed as indicated above. "Incomplete" work must be made up before the final examinations of the following year.

Students who carry conditions into a succeeding year may find a resultant conflict of study hours. In that event they will give preference to the unfinished studies of the lower or conflicting course.

Students must pass a majority of the studies of their year, in order to classify in the next succeeding year.

In the studies of the first and second years, the classes will recite in sections during hours regularly assigned for this purpose.

Habitual absence, without a satisfactory excuse, continued indifference to study, or persistently poor scholarship may subject the student to temporary or permanent suspension.

ATTENDANCE.

Students are required to attend four-fifths of the lectures in each course. This rule is not intended for the benefit of those who seek admission after the opening of the college year, but is designed to cover cases of sickness or unavoidable absence. It does not apply to laboratory courses which must be taken in full and must be entered, invariably, during the first week in which they begin.

TERMS OF TUITION.

The college has adopted a system of level fees, in which are included all charges for matriculation, lecture courses, laboratory courses,* dissections and graduation. These level fees are as follows:

For the first year	$100.00
For the second year	100.00
For the third year	80.00
For the fourth year	80.00

One-half of the annual fee will be payable when the student matriculates. The registrar's receipt for this portion of the fee will entitle the holder to take the entrance examinations and to classify. The second half will be payable at the opening of the second semester, February 6, 1900. If the

*In each semester a fee of $2.00 will be charged for the rental of a microscope in each course in which its use is required, provided the student is not supplied with a satisfactory instrument of his own. It is an advantage for the student to possess a microscope.

applicant fails to pass the entrance examination, his fees will be returned by the registrar. Absence or failure to continue study will not entitle the student to return of fees excepting in cases of special hardship, when application may be made to the executive committee of the Board of Regents.

A student who takes advanced standing will receive only a credit of five dollars upon his annual fee per semester for each laboratory course from which he may be exempt.

BREAKAGE AND LOSS.

In each laboratory course the student will be assigned a certain amount of apparatus and material, for which he will give a receipt.

For apparatus and material attaching to his laboratory desk he will also be held responsible. At the end of each course, if such apparatus and material are restored in good condition, this receipt will be returned to him.

All apparatus lost or damaged will be charged to him and must be paid for him before he can receive credit for his course or take his annual examination.

A statement of these charges will be submitted to the registrar and such breakage and loss fees will be payable to him.

SPECIAL STUDENTS.

Special students will pay to the registrar a fee of twenty dollars per year for each study they elect to pursue.

They will be charged fees, varying from five to twenty dollars, for each laboratory course they may enter.

Graduate students will pay an admission fee of ten dollars which will entitle them to attend any lectures they may desire in regular courses, but such attendance does not entitle them to any credits unless they pass the required entrance examination.

Senior students who fail to graduate by reason of conditions will be charged a registration fee of ten dollars.

CURRICULUM.

The course in the college of homeopathic medicine and surgery leads to the degree of doctor in medicine. It covers a period of four years of college study, each year representing eight and one-half months in actual residence.

The studies are graded, so far as practicable, throughout the four years and this grading is arranged with careful reference to the relation which the subjects naturally bear to each other.

The work of the first two years deals with the so-called scientific or laboratory branches; while that of the last two years includes the principles and practice of medicine and surgery, their associated specialties and the application of scientific or laboratory methods to clinical experience.

ADVANCED STANDING.

Applicants for advanced standing must pass the entrance examinations, or present the usual equivalents. They must furnish satisfactory evidence of the time spent and subjects covered in previous professional studies and must present themselves at the above dates and pass the examinations of all departments in which they wish to be exempt, if such examination is deemed necessary by the professors in charge of the various departments.

No conditions of advanced standing will entitle the student to take the two years of any graded study coincidently.

Seniors in the college of science, literature and the arts who contemplate entering the department of medicine are permitted to elect courses in anatomy, histology and embryology, physiology and chemistry in this department in lieu of similar science courses in the college of science, literature and the arts. This election will be contributive toward the degrees given in both colleges. Reciprocally the college of homeopathic medicine and surgery will accept full courses, taken in the college of science, literature and the arts, in histology, physiology and chemistry in lieu of the first year's work in these branches.

College of Homeopathic Medicine and Surgery

THE FACULTY.

CYRUS NORTHROP, LL. D., *President.*
ALONZO P. WILLIAMSON, LL. B., M. D., *Dean, and Professor of Mental and Nervous Diseases and Medical Jurisprudence.*
WILLIAM E. LEONARD, A. B., M. D., *Professor of Materia Medica and Therapeutics.*
GEORGE E. RICKER, A. B., M. D , *Professor of Clinical Medicine and Physical Diagnosis.*
ROBERT D. MATCHAN, M. D., THOMAS J. GRAY, M. D., } *Professors of Principles and Practice of Surgery.*
WARREN S. BRIGGS, B. S., M. D., MARSHALL P. AUSTIN, M. D., } *Professors of Clinical and Orthopædic Surgery.*
B. HARVEY OGDEN, A. M., M. D., *Professor of Obstetrics.*
EUGENE L. MANN., A. B., M. D., *Professor of Diseases of Nose, Throat and Ear.*
FREDERIC M. GIBSON, M. D., O. et A. Chir., *Professor of Ophthalmology.*
GEORGE E. CLARKE, Ph. B., M. D., *Professor of Theory and Practice of Medicine.*
GEORGE F. ROBERTS, M. D., EDWARD E. AUSTIN, M. D., } *Professors of Diseases of Women.*
HARRY M. LUFKIN, M. D., *Professor of Diseases of Children.*
THOMAS J. GRAY, M. D., *Professor of History and Methodology of Medicine.*
ROBERT R. ROME, M. D., *Professor of Clinical Obstetrics.*
ASA F. GOODRICH, M. D., *Professor of Skin and Genito-urinary Diseases.*

Instruction in the following branches is received in common with the students of the other colleges in the department of medicine:

GEORGE A. HENDRICKS, M. S., M. D., *Professor of Anatomy.*
RICHARD O. BEARD, M. D., *Professor of Physiology.*
CHARLES J. BELL, A. B., *Professor of Chemistry.*
JOHN F. FULTON, Ph. D., M. D., *Professor of Hygiene.*
THOMAS G. LEE, B. S., M. D., *Professor of Histology and Embryology.*
F. F. WESBROOK, M. A., M. D., C. M., *Professor of Bacteriology and Pathology.*
J. CLARK STEWART, B. S., M. D., *Professor of Surgical Pathology.*
O. K. RICHARDSON, B. S. M. D., *Lecturer on Life Insurance Examination.*
EDWARD M. FREEMAN, B. S., *Instructor in Botany.*
JAMES F. BECK, M. D., *Adjunct to Chair of Physical Diagnosis.*
EDWIN H. SMITH, *Dispensary Assistant.*

ANNOUNCEMENT.

THE COLLEGE OF HOMEOPATHIC MEDICINE AND SURGERY offers special advantages to all students seeking a medical education. Through the generosity of the State, an equipment of buildings, laboratories and ap-

paratus is provided, equal to that of the best medical schools in this country or in Europe. With this equipment it is possible to lay that broad foundation for a medical education, without which no physician can hope for the highest success. An institution deficient in the requirements for teaching the fundamental branches of medical practice cannot long maintain the confidence of the medical profession. The claim once made that homeopathic medicine could be mastered in a few months study of materia medica and symptomatology, no longer meets the demands of an intelligent patronage. Homeopathy, as an expanding science, draws towards itself as a part of its rightful possession, every addition to medical knowledge that can be of any service in the cure of the sick. The homeopathic physician should feel that he is the "heir of all the ages" in medical learning, having that catholicity of training which places at his command every known resource including as his especial advantage, the added power of coping with disease, that comes from his knowledge of the science of homeopathy.

The breadth of view this result implies is provided in the college of homeopathic medicine and surgery in a real university course of study in, first: the history of medicine, botany, chemistry (organic and inorganic), histology, embryology, bacteriology, pathology, anatomy, physiology, hygiene and sanitary science, with all the accessories of laboratory work; second: in building upon this foundation a comprehensive knowledge of therapeutics, practice and surgery. The student has daily training in both the practical and theoretical aspects of medicine. In the first two years the practical training is provided in constant individual work in the laboratories or dissecting rooms; in the last two in a broad field of clinical study and observation, in both medical and surgical cases, which the nearly one-half million population of the twin cities abundantly supplies. The theoretical work is carried on in daily didactic lectures and text-book study throughout the entire course.

Especial emphasis is placed upon clinical instruction in both dispensary and hospital practice. Senior students will have opportunity to attend out-door patients, assist in special and general operations, and to attend obstetrical cases during the last course of lectures.

The college has now fairly passed the formative experiences incident to the early life of institutions and has become an integral part of the educational and professional forces of the state. Its alumni now at work in the state are the evidence of the character of its work. The loyal support of the profession throughout the northwest has encouraged and upheld the faculty in giving form to this new phase of the state work.

The college proposes to stand for a broad catholic, scientific, and therefore homeopathic, education in medicine and surgery.

EXAMINATIONS.

Examinations will be conducted at the end of each year, upon subjects taught during the year, according to the schedule printed elsewhere. Attendance upon at least four-fifths of the lectures under each department is

required in order that a stutent may be allowed to enter for final examination, or to receive a certificate of attendance. Ten per cent of the graduating class will be recommended to receive the degree of doctor of medicine, "*cum laude.*" The selection will be based upon the efficiency of the work of the student during the period of the entire course.

CLINICS.

Every member of the faculty (with two exceptions) is a clinical teacher. Thus each professor demonstrates the application of his didactic work.

DISPENSARY CLINICS.

The dispensary, located at 1416 Washington avenue south, occupies an entire building, and thus increased and unusual facilities are offered the student for individual examination of patients. The location is within easy access of those whose means compel them to ask dispensary assistance, and presents ample opportunity for the study of all forms of disease usually met with in practice. Patients present themselves in large numbers daily, (more than six thousand prescriptions having been made during the last year), and are assigned to particular departments according to the nature of their diseases. The classes are so divided and arranged as to afford every student abundant opportunity to familiarize himself with the best methods of diagnosis and treatment of the various maladies, medical and surgical, with which the clinic abounds. The college clinics are conducted throughout the entire year. Students and practitioners are invited to attend them at all times.

SUBJECT.	CLINICIAN.	CLINIC DAYS.	DAYS IN ATTENDANCE
Diseases of Women	Professor E. E. Austin (Assistant Dr. F. L. Beckley)	Monday	Monday and Thursday
Nervous Diseases	Professor A. P. Williamson	Monday	Monday and Friday
Diseases of the Eye	Professor F. M. Gibson (Assistant Dr. E. E. Hurd)	Tuesday	Tuesday and Saturday
Diseases of the Skin	Professor A. F. Goodrich	Tuesday	Tuesday
Diseases of the Nose, Throat and Ear	Professor E. L. Mann (Assistant Dr. H. S. Liddle)	Wednesday	Wednesday and Saturday
Obstetrics	Professor R. R. Rome	Wednesday	Wednesday
Surgery	Professor M. P. Austin	Thursday	Monday and Thursday
Internal Medicine	Professor G. E. Ricker (Assistant Dr. J. F. Beck)	Friday	Tuesday and Friday
Diseases of Children	Professor H. M. Lufkin (Assistant Dr. Margt Koch)	Saturday	Wednesday and Saturday

HOSPITAL CLINICS.

The college has unusual advantages in hospital clinics. In addition to the call upon students to assist the various professors in private cases, reg-

ular clinics are provided in the city hospitals of both St. Paul and Minneapolis and in St. Luke's and St. Joseph's hospitals in St. Paul.

Each Monday is devoted to clinics held in one of the hospitals, by a member of the faculty.

MINNEAPOLIS.

Oct. 2nd, 16th and 30th, 1899.	Feb. 5th and 19th, 1900.
Nov. 6th and 20th, 1899.	March 5th and 19th, 1900.
Dec. 4th and 18th, 1899.	April 2nd, 16th and 30th, 1900.
Jan. 1st, 15th and 29th, 1900.	May 7th and 21st, 1900.

ST. PAUL.

Oct. 9th and 23rd, 1899.	Feb. 12th and 26th, 1900.
Nov. 13th and 27th, 1899,	March 12th and 26th, 1900.
Dec. 11th and 25th, 1899.	April 9th and 23rd, 1900.
Jan. 8th and 22nd, 1900.	May 14th, 1900.

CITY HOSPITAL, MINNEAPOLIS.

The faculty of the college of homeopathic medicine and surgery is largely represented on the staff of this institution, where one-third of all the patients admitted are placed under their care.

Mr. A. E. Booth, of the senior class, has served as interne during the past year.

CITY HOSPITAL, ST. PAUL.

A full staff of homeopathic physicians and surgeons was created last year, including all St. Paul members of the college faculty. Each member of the staff is on duty two months of the year and has charge of all cases coming into his department during that time and uses suitable ones for clinical purposes.

Mr. A. T. Caine, of the senior class, was appointed interne for one year.

HOSPITAL INTERNES.

Graduates of this college are eligible for appointment to the position of interne in the Minneapolis City and St. Paul City and County Hospitals. Two internes are appointed each year after a competitive examination, in the former, and there are four vacancies in the latter each year for which the students may apply.

ST. LUKE'S HOSPITAL, ST. PAUL.

This hospital has recently erected a new building, thoroughly equipped with all modern facilities for caring for medical and surgical cases. It contains an amphitheatre in which clinical lectures are delivered. A number of the faculty are members of the visiting staff.

ST. JOSEPH'S HOSPITAL, ST. PAUL.

Through the addition to its staff of members of the college faculty, students have access to both the surgical and medical cases upon exactly the same footing as in other hospitals.

GENERAL REMARKS.

In all hospital work students are given special bedside instruction in diagnosis, in "taking the case," in prescribing, in surgical dressing, in the after care of patients and all forms of accessory treatment.

ACKNOWLEDGEMENTS.

In continuance of the custom established five years ago, an invitation was extended to members of the profession, not connected with the college, serving upon the staffs of the several hospitals of the two cities, to lecture or present clinical demonstrations to the students. The faculty desires to express its appreciation to the following physicians and surgeons for their generous acceptance of the invitation: Drs. Adele S. Hutchison, Pearl M. Hall and Charles Neill, of the City Hospital staff, Minneapolis, and Drs. Henry Hutchinson, Harry M. Lufkin and O. M. Hall, of the staff of the City and County Hospital, St. Paul, and St. Luke's Hospital, St. Paul. The faculty is also under obligations to Dr. J. Davidson Lewis, of St. Paul, for a series of very valuable lectures on diseases of the ear, and to Dr. H. S. Liddle, of Minneapolis, for an exceedingly complete course of instruction, both clinical and didactic, upon the nose and throat.

COURSE OF INSTRUCTION.

The extension of the course of instruction to four years enables the faculty to present to the students a more thorough and practical training in the practice of medicine than has heretofore been possible. The schedule of study is so arranged that the student reaches the practical work of his profession by gradual steps through theoretical and laboratory courses. There are also offered lectures upon subjects which have been omitted in previous years, because of lack of time.

FIRST YEAR.

History and methodology of medicine.
Medical terminology.
Medical botany.
Inorganic chemistry—laboratory.
Histology and embryology—laboratory.
Anatomy—bones, muscles and joints.
Physiology.
Homeopathic pharmacy.

SECOND YEAR.

Materia medica—experimental.
Organic chemistry—toxicology and urinalysis.
Anatomy, dissection.
Physiology—chemical and experimental.
Surgical emergencies and bandaging.
Hygiene and sanitary science.

THIRD YEAR.

Surgical anatomy.
Bacteriology, general pathology.
Materia medica and therapeutics.
Practice of medicine, organon and institutes of medicine.
Clinical medicine and physical diagnosis.
Obstetrics.
Principles and practice of surgery.
Diseases of women.
Ophthalmology.
Nose, throat and ear.
Clinics, medical and surgical.
Medical jurisprudence.

FOURTH YEAR.

Surgical pathology.
Materia medica and therapeutics.
Practice of medicine.
Clinical medicine.
Mental and nervous diseases.
Dermathology and genito-urinary diseases.
Obstetrics.
Clinical obstetrics.
Principles and practice of surgery.
Ophthalmology.
Diseases of women—didactic and practical.
Orthopædic and clinical surgery.
Clinics, medical and surgical.
Paenology.
Electro Therapeutics.
Life insurance examinations.

MATERIA MEDICA AND THERAPEUTICS.

The course upon this topic is graded to cover four years' study. Lectures, daily quizzes and daily demonstrations of materials and methods are held regularly throughout the year, pains being taken to fit each student for the actual practical application of his knowledge.

FIRST YEAR

One lecture each week is given upon the methods of homeopathic pharmacy. each student being trained in writing and filling prescriptions and having demonstrated before him the more common preparations. Apparatus and material for these purposes are taken from Prof. Leonard's laboratory, which is abundantly supplied with the crude and perfected drugs for demonstration throughout the course. Mr. G. A. Babendrier, who has kindly given this instruction so satisfactorily for several years will continue the same the coming year.

SECOND YEAR.

Lectures and quizzes twice each week upon the toxicology and physiological action of a few drugs, each typical of a class of remedies, thus furnishing the groundwork for a more detailed study of symptoms in later years, As far as possible, actual experiments in testing drugs upon members of the class will be made, the blanks used and methods being under Prof. Leonard's personal supervision and in accordance with the rules of the Provers' Union of the American Institute of Homeopathy.

THIRD YEAR.

Three lectures a week, with quizzes, upon the vegetable remedies, about thirty major and seventy-five minor drugs, of the materia medica, arranged according to their natural groups and their clinical relationships in disease, and studied in their origin, history, preparation, physiology and symptomology, full practical comparison being made with other allied remedies. The endeavor in these studies and those of the following year will be to present only such usage of drugs as is practical and fully corroborated, little, if any, time being spent upon their minor and less fully proven applications.

FOURTH YEAR.

Three lectures and quizzes each week upon the mineral, animal and nosological remedies of the materia medica—about forty major and twenty minor drugs, grouped and studied in detail as those of the second year, attention being given to their toxicology and physiological action, where this had a direct bearing upon their homeopathic application to chronic diseases, in as much as the drugs of this course are more often applied thereto.

Three lectures each week, two semesters, senior year.

Examinations in the form of written review quizzes from time to time or at the end of the term, will be held, the student's final standing being made up of this and his daily quiz markings.

THEORY AND PRACTICE.

Lectures on the theory and practice of medicine will be delivered to students of the third and fourth year. It will be the purpose to thoroughly acquaint the student with the description, course and diagnosis of disease, and the method of treating such disease in accordance with the Homeopathic law of cure.

The cardinal principles of the philosophy of homeopathy will be clearly presented in didactic and clinical lectures. Students are familiarized with accurate methods of investigation, record of symptoms and history of cases; with the use of the repertory to assist in accurately affiliating the indicated remedy.

THIRD YEAR.

The course of the students of the third year consists of twenty-six didactic lectures, mainly on diseases of the mouth, stomach and bowels. Eight lectures will be given on the philosophy of homeopathy. Frequent selections of cases from private practice will be given to better set forth the various lectures, as well as methods employed in the record of cases and selection of the remedy. One-half of the time allowed will be employed in frequent quizzes and review of the work gone over.

FOURTH YEAR.

The course to students of the fourth year consists of twenty-two didactic lectures on pulmonary and hepatic affections, with such of the important continued fevers as fall to this chair. The Organon work will take the form of frequent "class-room talks," chiefly on the subjects of the following sections, viz: 272-274; 247; 245-251; 252-251; 167-168; 204-205.

In addition, students will be required to present written reports of the history and symptoms of cases treated, the repertory work in selecting the remedy, the dose, repetition and results. Much time and attention will be given to this feature of the course as tending in the highest manner to perfect the pupil in the art of *accurate prescribing*.

PHYSICAL DIAGNOSIS.

The course on physical diagnosis consists of a series of twenty-four didactic lectures to the third year class illustrated upon the healthy human subject, thus familiarizing the student with the normal appearances, feelings and sounds. These lectures are classified as follows: Introduction, general examination, respiratory system, circulatory system, digestive system, urinary system.

CLINICAL MEDICINE.

FOURTH YEAR CLASS.

For this course abundant material is found in the University homeopathic free dispensary, where clinics are held twice a week, and in the City Hospitals of Minneapolis and St. Paul, where the clinics are held each Monday morning.

In these clinics particular effort is made to supplement the course in physical diagnosis and to fully illustrate the application of the homeopathic law in therapeutics.

In order that the student may obtain as wide a view as possible in this all important branch, they receive instruction not only from Professor Ricker at the bedside in the City Hospital wards, but from the various members of the homeopathic staffs in the Twin Cities, attending the hospitals but not otherwise connected with the University.

In addition the dispensary furnishes many outside cases which are treated in their own homes by the members of the fourth year class, under the supervision of Professor Ricker, thus enabling the student to acquire the self-reliance and confidence so necessary to the beginning practitioner.

SURGERY.

Two years ago the work in surgery was greatly enlarged. It now occupies two full years, the third and fourth and includes the labors of four members of the college faculty The work is divided into clinical and didactic surgery.

CLINICAL SURGERY.

The work in clinical surgery will consist in operations before the class in connection with which clinical lectures will be given upon the cases presented. These will occupy each Monday of the fourth year, which is set apart as the day for clinics. The third year class is required to attend the clinics, unless their regular class work interferes. The second year students will receive thorough practical instruction in bandaging two hours each week, two semesters.

The diagnosis, prognosis and homeopathic treatment and the operations for surgical diseases and accidents will be taught practically.

At the clinics which are held at the City and County Hospital, St. Luke's and St. Joseph's Hospitals, of St. Paul, and the City Hospital and Free Dispensary of Minneapolis are demonstrated the value of antiseptic and aseptic treatment of wounds, the minute details of the application of surgical appliances and dressings, and operative technique. Post-operative care for reaction, shock, etc., will be considered.

Senior students are instructed in the practical use of anæsthetics and are required to attend a number of surgical patients at their homes, carrying out post-operative detail under the direction of the professor.

DIDACTIC COURSE.

The didactic course covers the entire field of the principles and practice of surgery. The lectures will occupy the third year class two hours and the fourth year class three hours each week. Demonstrations will be made upon the cadaver, aided by models and charts.

The lectures to the third year class will include surgical pathology, inflammation, hemorrhage, surgical appliances, surgical emergencies, minor surgical operations, ligation of arteries, burns and scalds, surgical treatment of the anus and rectum, antiseptics. anæsthetics, abscesses, ulcers, gangrene, hernia and the elements of the treatment of wounds, fractures, dislocation and amputation.

The lectures of the fourth year class will include the surgery of the bones, joints, genito-uninary organs, tumors, cysts, fractures dislocations, amputations, syphilis, together with the operative surgery of the head, face, chest, abdomen, pelvis, skin, nerves and extremeties.

All the lectures will aim to be comprehensive, practical and in keeping with the best standards of advanced surgery.

ORTHOPAEDIA.

The course on this subject is both didactic and clinical. It consists of one lecture a week during the fourth year.

The whole subject of deformities, their causes, care and removal, is carefully considered in detail. The mechanical apparatus used in the treatment of such cases is exhibited and rules are laid down for the improvising and applying temporary means and instruments. Recent progress in the knowledge of the underlying causes of bony, muscular and habit deformities, and their serious reflex effects, has led to great changes in the methods pursued to overcome them.

The early recognition and treatment of such cases are of the utmost importance and hence, as they are usually first presented to the general practitioner, a full knowledge of this branch of surgery becomes exceedingly valuable.

The subjects discussed include functional and organic diseases of the bony spine, the several forms of club-foot, joint inflammations, both simple and tuberculous, and their sequelle, cleft-palate, hair-lip, etc.

OBSTETRICS.

This subject will be taught by lectures and recitations, thoroughly illustrated with charts, manikins and specimens. The course will be graded and divided between the third and fourth years.

During the third year the subjects covered will embrace the anatomy and physiology of the female generative organs and the pelvis, the development of the embryo, the maternal changes of pregnancy, the diagnosis of pregnancy, the physiology, pathology and hygiene of pregnancy, the physiology and course of normal labor, the conduct of normal labor and the management of the puerperium.

During the fourth year the following subjects will be taught: the mechanism of labor, diagnosis and management of the various presentations, dystocia, complications of labor, physiology, pathology and management of the puerperium, and obstetric surgery.

CLINICAL OBSTETRICS.

This department will instruct the fourth year students and apply practically the teachings of the department of obstetrics. An abundance of material is supplied by the dispensary and city hospitals of St. Paul and Minneapolis. The student will be thoroughly educated to locate accurately the position and condition of the internal parts both in health and disease, the obstetric points of the pelvis, as well as the diameters, planes and curve, the presentations, and positions of the child and methods of diagnosis, the stages and mechanism of labor, the management of normal and abnormal labors, the application of the forceps and the necessary steps in performing version.

Each member of the class will be assigned at least three cases of pregnancy which he will be required to attend under the immediate direction of the professor of the chair.

During the last month of the pregnancy of a case so assigned, the student in charge will report to the professor the patient's name, address, age, number of previous labors, date of first and last labors, date of quickening, condition of the uterus, heart, lungs, bowels, kidneys, etc., and a detailed statement regarding the appearance of the patient, location of the foetal heart, position of the child, character and size of the pelvis.

At the time of the labor the student will be required to keep a record of the following facts:

No. of the case, date, name, address, condition of the Os uterus, height of presenting part, pulse rate and quality (ante and post partum), rapidity of foetal heart beats and where heard most clearly, presentation, position and duration of the first, second and third stage.

Also the sex of the child, the diameters of its head, weight and length. The post partum condition of the uterus, cervix and perineum.

An operative course on the female cadaver will also be given, demonstrating the operative technique in symphisiotomy and Cæsarean section.

DISEASES OF WOMEN.

This course will consist of one didactic lecture during the third and fourth year and two clinics a week during the fourth year.

In the third year, both semesters, the anatomy, physiology and pathology of the pelvic contents and perineum are carefully described. The preparation of the patient for surgical operation together with the necessary steps taken, the various surgical procedures as well as the medical treatment of all pelvic diseases, will receive minute attention during both semesters of the fourth year.

The medical and surgical diseases of women will be treated in didactic lectures and recitations. The entire field of gynæcology will be covered in the lecture room. As cases present themselves in the city hospitals of St. Paul and Minneapolis, the subjects thus described will be demonstrated on the living subjects.

DISEASES OF CHILDREN.

The course on this subject will consist of one lecture each week and two clinics to the fourth year students, and extending over two semesters. The clinics are full and afford an exceptional opportunity to study the common diseases of childhood. In the out-door department many cases of exanthematous cases are treated by the members of the class.

The didactic course embraces a description of the normal development of infancy and childhood, natural and artificial infant feeding, signs and symptoms of hereditary syphilis, contagious and infectious diseases, tuberculosis, erysipelas, and the diseases of the respiratory and urinary organs; those of the circulatory, nervous and digestive systems, rhachitis and diseases of the skin.

MENTAL AND NERVOUS DISEASES.

This course consists of twenty-eight didactic lectures, in the fourth year, and as many clinical demonstrations as material is presented at the dispensary and the City Hospital Minneapolis. It is the aim of the chair to qualify the student to detect the earliest symptoms of insanity and diseases of the nervous system.

The anatomy and physiology of the brain and spinal cord are reviewed, and particular attention is paid to the causes, development, characteristic symptoms and the pathological conditions of the diseases of the nervous system. The therapeutics, dietetics and directions for the personal care in each disease is especially elaborated.

ELECTRO-THERAPEUTICS.

This subject will be carefully taught. The physics of electricity will be sufficiently considered to enable the student to understand the construction and manipulation of galvanic faradic, sinusoidal and static batteries. The application of every form of electricity to disease will be practically demonstrated.

OPHTHALMOLOGY.

In the department of Ophthalmology the endeavor is to give thorough instruction in those parts of the work which will ordinarily come into the hands of the general practitioner.

The course is supplemented by as much practical work as time allows, in the use of the ophthalmoscope for the study of intraocular troubles whose recognization would aid in the diagnosis of various constitutional affections; and following a short didactic course given early in the year on the subject, practical work in the correction of the refraction is carried on at the dispensary during both semesters.

The clinical material provided in this department is very abundant, interesting and instructive cases, embracing all varieties of eye troubles calling for medical and surgical aid being presented to the students bi-weekly throughout the entire year.

The following schedule shows the subjects considered in the present course of lectures.

Anatomy and physiology of the eye; refractions and use of the lenses for the correction of its errors; diseases of the lids; conjunctiva; cornea; sclera; lachrymal apparatus; iris and ciliary body; lens; choroid; retina and optic nerve; affections of the muscular apparatus of the eye and the general relationship between eye strain and reflex and nervous disorders. The didactic course consists of thirty-two lectures during the fourth year and ten during the third year.

DISEASES OF THE NOSE, THROAT AND EAR.

The course will consist of didactic lectures and clinical demonstrations.

One didactic lecture a week will be given to students of the third year. An understanding of the anatomy and physiology of the organs is presupposed and but little time will be devoted to the review of the more important points in their bearing upon diseases of these organs. The lectures will enter upon a study of the diseased processes in the nose—the various forms of acute and chronic catarrhal inflammation, their causes, development, symptoms, consequences and treatment both general and local, abnormal growths, affections of the septum and diseases of the accessory sinuses, finishing the course on the nasal cavaties with the neuroses, functional and organic.

The diseases of the nasc-pharynx are treated with special reference to their dependence upon nasal conditions and their influence upon the organ of hearing. The course includes acute and chronic catarrhal processes, adenoid vegetations and morbid growths.

Diseases of the pharynx are considered in their dependence upon alimentary disorders, acute and chronic inflammatory conditions; morbid growths and neurosis, together with the pharyngeal and tonsillar conditions incident to the exanthemata, diphtheria, typhoid fever, etc.

In the laryngeal disorders we become more closely associated with respiratory diseases; the various forms of laryngeal inflammation, morbid growths and nervous affections will be discussed—especial stress being put upon the early laryngeal manifestations of tuberculosis and the laryngeal disorders of voice users with the importance of proper vocalization and respiration upon all diseases of this organ.

Ear diseases resolve themselves into: diseases of the external canal and pinna, dermoid inflammations; diseases of the middle ear, mucous inflammations; and diseases of the internal ear, serous and nerve inflammation.

The course to the fourth year students will be entirely clinical, the class being divided into sections for dispensary work; the aim will be to familiarize the students with the use of the various diagnostic means at their disposal, and the appearance of the various abnornal conditions, together with the technique of the numerous operative procedures. The material for clinical demonstrations is abundant.

SKIN AND GENITO URINARY DISEASES.

This course will consist of one didactic lecture, and one clinic each week for students of the fourth year. It will include the disease of the skin, syphilis and all genito urinary diseases including the kidneys.

The first semester will be devoted to a study of genito-urinary and kidney diseases, the second to diseases of the skin and syphilis. The dispensary clinics will be especially valuable in supplementing the work of the professor in the lecture room by familiarizing the students with the appearance of the various forms of skin diseases so essential to a correct diagnosis of the same.

MEDICAL JURISPRUDENCE.

The object of this chair is to familiarize the student with his duties, rights and responsibilities from a legal standpoint. The law on each subject discussed is carefully explained and illustrated, as far as possible, with adjudicated cases.

HISTORY AND METHODOLOGY OF MEDICINE.

The lectures given in this chair are an exposition of the philosophy and art of medicine by the historical method. The student is taught to see how in each age the *practice* of medicine has been the outgrowth of the beliefs current regarding the nature of man. Give to a student the theories held by a people regarding the constitution of matter, the nature of mind and force, and he can accurately foresee the medical science such a people will accept. The unfolding of the world's thought in medicine sets homeopathy in its high place and gives the student an outlook much needed in the profession. The tendency of medicine has always been to over-estimate the material side of man's nature and to make innumerable hypotheses to explain disease. The conflicts in medicine have been the clashing not of opposite sects, but of antagonistic systems of thought, and reconciliation is possible only on the grounds of a higher science than that of mere sense knowledge. This ground is revealed in the history of the philosophy of medicine.

The course includes the medicine of the Egyptians, Persians, Indochinese, Hebrews, Greeks, Arabians and of Europe down to the present.

One lecture each week during the Freshman year.

LIFE INSURANCE EXAMINATION.

This subject will be taught with the purpose of familiarizing the student with all the duties and responsibilities belonging to the position of medical examiner.

HISTOLOGY AND EMBRYOLOGY.

The laboratory of histology and embryology occupies most of the first floor and of the laboratory of medical sciences.

The general laboratory, 44x72 feet, extends across the north wing and is abundantly lighted by large windows on three sides and part of the fourth. Study tables accommodating seventy students are placed directly under the windows. A second tier of desks provides for twenty other students. Each student is furnished with a separate locker for the storage of apparatus and material. The special laboratory, 24x35 feet, for research work by advanced students, adjoins the general laboratory. The next apartment, the library of the laboratory, contains a reference library consisting of a small but carefully selected collection of related literature, both standard and periodical.

These laboratories are equipped with seventy-five Leitz' microscopes, each fitted with nosepiece and Abbé condenser, various forms of microtomes, such as freezing, Thoma, Minot, Schanze, &c., injection apparatus, aquaria, thermostats, incubators, water baths, chemical hoods, a great variety of technical glassware, Grübler's stains, a set of His' wax models, photomicrographic and reconstruction apparatus, charts, reference cabinets containing carefully selected slides, a large collection of hardened histological and embryological material with an abundant supply of fresh tissues.

The courses are made as practical as possible, beginning with the technique of the microscope, followed by the preparation of permanent specimens. Collections of typical specimens, also, will be loaned to the students for study. During the two years course the student will acquire a valuable collection of slides of his own preparation illustrating the structure and development of the human body.

The course is illustrated by charts and lantern-slides of histological and embryological specimens. Demonstrations are given under the microscope of typical sections of tissues and organs, accompanied by camera lucida drawings, or photo-micrographs, with explanatory text.

All students are recommended to purchase a microscope at the beginning of their medical course. This instrument is an indispensable part of the outfit of a well-trained physician. Suitable microscopes can be purchased at from $50 to $60, which may be fitted at any time with such other parts as may be desired.

Students not owning microscopes will be furnished with instruments at a rental of $2 per semester for each course requiring the use of a microscope.

Course I. General morphology and histology.

Lectures, demonstrations and laboratory work. The course includes the structure and manipulation of the microscope, the structure and properties of protoplasm; the cell, its structure; cell division and reproduction. A detailed study of the structure and life history of certain typical unicellar animal and plant forms, and of certain multicellar forms, leading to the consideration of the elements of structure in the vertebrata. A comparative study of the histology of the blood, of the epithelial, connective, muscular and nervous tissues and of the vascular and lymphatic systems. Lectures, etc., 2 hours a week. Laboratory work, 6 hours a week, 1st semester, 1st year.

PROFESSOR LEE, DR.W. S., AND M. L. NICKERSON.

Course II. Elements of embryology and histogenesis.

Lectures, demonstrations and laboratory work. A comparative study of reproduction; the ovum, the spermatozoon, fertilization, cleavage, formation of blastodermic layers. the formation of the embryo, foetal envelopes, etc., with practical work on chick, frog and mammalian embryos. The differentiation and histogenesis of the tissues. etc. Lectures, etc., 2 hours a week; laboratory work 6 hours a week, 2d semester, 1st year. Open to those who have completed course i.

PROFESSOR LEE, DR. W. S., AND M. L. NICKERSON.

Course III. Advanced histology and embryology.

Lectures, demonstrations and laboratory work. Advanced methods of histological and embryological technique, with practical laboratory work. The comparative study of the minute structure, origin and development of the various organs of the integumentary, alimentary, respiratory and uro-genital systems; the central and sympathetic nervous systems, the organs of special sense, etc. Lectures, etc., 2 hours a week; laboratory work, 3 hours a week. 1st and 2d semesters, 2d year. Open to those who have completed the courses of 1st year in histology and embryology. PROFESSOR LEE, DR. W. S., AND M. L. NICKERSON.

The following courses are open to properly qualified students and will consist of practical work in the laboratory, a prescribed course of reading, with reports of work, and of lectures and demonstrations to be given from time to time.

Course IV. Methods of microscopical work.

The preparation and use of the various solutions employed in fixing, hardening and staining; methods of embedding, sectioning, reconstruction, etc.

Course V. (*a*) *Comparative histology and histogenesis of the tissues.*

The animal cell, the epithelial, connective, muscular and nervous tissues, blood, etc.

(*b*) *Comparative histology and embryology of the viscera.* The epidermal, digestive, respiratory and uro-genital systems of organs.

(*c*) *Comparative histology and histogenesis of the nervous system and sense organs.* Central nervous system, etc., after the methods of Weigert, Golgi, etc.

Course VI. Comparative embryology of vertebrates.

A detailed study of the various stages in the development of vertebrate types, as acanthias, petromyzon, trout, amblystoma, frog, chick, rat, pig and human embryos.

Research work in histology and embryology.

Opportunity will be offered for those desiring to pursue original investigations.

Courses III and VIII in animal biology in the college of science, literature and the arts are accepted in lieu of first year histology and embryology in the department of medicine.

ANATOMY.

The department of anatomy occupies rooms in medical hall. These include two large student's dissecting rooms, the general laboratories of anatomy, a bone laboratory for research work, the offices of the professor and demonstrator of anatomy, preparation rooms and morgue. An ample supply of dissecting material is provided.

The bones of the human skeleton are furnished to the student for purposes of study and recitations from the specimen are conducted by the demonstrator of anatomy.

A series of lectures upon syndesmology follows, accompanied by recitations, which are illustrated by human preparations and by fresh and preserved sections of joints.

A course of descriptive lectures in myology is then given, with demonstrations upon the cadaver.

Lectures and a brief course of dissections of the abdominal and thoracic viscera of the lower animal complete the work of the first year in this branch.

In the second year, the student takes lectures, recitations and demonstrations of the vascular system, the alimentary canal, the respiratory tract, the genito-urinary system and the inguinal and perineal structures. He then pursues a course in regional anatomy, embracing a study of the surgical regions of the entire body; a course in the anatomy of the eye and ear and of the brain, spinal cord and ganglionic system, illustrated by fresh and permanent preparations, models and diagrams.

He dissects, during the year, the entire human body; recites upon the subject and observes demonstrations made by a corps of assistants under the direction of the demonstrator of anatomy.

In the third year, the student takes up the study of the human body from a topographical standpoint and is given a thorough review of the surgical regions, emphasizing the practical points in the relations, structure and distribution of the nervous system.

Course I. Osteology.

Lectures and recitations upon the human skeleton and supplementary work on the osteology of domestic mammals; three hours each week, for 10 weeks of first semester. Practical study of the skeleton, followed by recitations from the specimen, taken by the class, in sections, 2 hours each section, for 10 weeks, first semester. Required of all first year students.

Course II. Syndesmology.

Lectures, recitations and laboratory demonstrations. 3 hours each week, for 4 weeks, first semester. Open to those who have taken course i.

Course III. Myology.

Lectures and recitations, covering the entire muscular system of the human body, with supplementary study of comparative myology; 3 hours each week, 16 weeks. Laboratory work consists of identifying the muscles of the human body on dissected preparations and showing their actions. Class, in sections, 4 hours each week, for 5 weeks. Open to those who have taken course ii.

Course IV. Splanchnology.

Lectures on the thoracic, abdominal and pelvic viscera; 2 hours each week, for 10 weeks. Open to those who have taken course iii. Laboratory work, demonstrating and dissecting the thoracic, abdominal and pelvic organs of the human subject or of the dog or sheep.

Semi-weekly recitations upon the subjects of the first year's course, conducted in sections. PROFESSORS HENDRICKS AND ERDMANN.

Course V. Splanchnology.

Descriptive and topographical anatomy of the thoracic viscera, the alimentary and urino-genital organs. Lectures and recitations, 3 hours each week, for 10 weeks. Required of second year students.

Course VI. Descriptive and surgical anatomy.

Head, neck, trunk and extremities. Lectures and recitations, 3 hours each week, for 12 weeks. Open to those who have completed course V.

Course VII. The nervous system.

Cerebro-spinal axis and its membranes; the cranial and spinal nerves; the sympathetic nervous system; and the special sense organs. Lectures and recitations, 3 hours each week, for 8 weeks. Open to those who have completed course IV.

PROFESSOR HENDRICKS.

Course VIII. Dissecting.

The work extends over 2 periods of 6 weeks each, requiring 5 afternoons of each week. The method of work follows that laid down in Holden's Manual of Dissections. PROFESSOR ERDMANN and DR. HACK.

The second year lecture and dissecting courses are open to those having completed the first year's work in anatomy and histology.

Weekly recitations upon the subjects of the second year's course, conducted in sections.

Course IX. Surgical anatomy.

The instruction consists of dissections, demonstrating the relations of structures composing the surgical regions of the body; demonstrations upon the living subject, showing the anatomical and surgical landmarks, and their applications; also the location, by surface tracings, of the viscera contained in the various cavities and of the important arteries, veins and nerves. 1 hour a week, second semester. Required of third year students.

PROFESSOR HENDRICKS AND DR. ERDMANN.

Course X. Applied anatomy of the nervous system.

Elective.

Opportunity is afforded for advanced work in practical anatomy at any time during the college year.

PHYSIOLOGY.

The department of physiology occupies a suite of rooms in the laboratory of medical sciences, including the laboratory of experimental physiology, the laboratory of physiological chemistry and practical dietetics, a demonstration and recitation room, the laboratory library and the office of the professor in this branch. A large amphitheater, adapted to the demonstration of major experiments, immediately adjoins the physiological laboratories and is used, also, for lecture purposes by this and other chairs.

In the basement of the laboratory of medical sciences, the chair maintains large and well equipped animal-rooms, which are furnished with a large aquarium, frog tanks, animal enclosures and breeding cages. From this animal room are furnished supplies of material and animals for the work in experimental physiology, physiological chemistry, histology, embryology, pathology and bacteriology. The hygienic conditions of the room are studied carefully, with a view to maintaining the physiological and structural integrity of its animal occupants as perfectly as possible. Stock required for bacteriological purposes is removed and placed in an isolated department at a distance from this room.

The physiological laboratories are equipped with a full supply of apparatus, instruments, etc., for experimental purposes, and with materials, glassware, digesters, water baths, ventilating hoods, etc., for the work in physiological chemistry. Their outfit includes sets of vivisection instruments, an artificial respiratory machine, batteries; Du Bois-Reymond coils, galvanometers, rheostats, moist muscle chambers, recording drums, Ludwig's kymograph, spring myograph, Burdon-Sanderson's stethometer, Dudgeon's sphymographs, Runnes'

chronographs, Roy's tonometer, Gaskell's clamp, oncometers, hœmometers, hœmoglobinometers, plethysmograph, etc., etc. They are furnished with motor power for the operation of recording apparatus and for the manufacture of apparatus in the laboratory workshop.

The course in physiology is graded in the first and second years. In the first year, the student hears lectures, recites and attends demonstrations in general physiology. These embrace the discussion and, so far as possible, the observation of the physiological ingredients of the animal body: the study of the physiology of cell-life, of the fundamental properties of the cell; of the nutritive media, blood, lymph and chyle; of the elementary functions of the nervous system; of the muscular tissues, the connective tissues, and the epithelial tissues; of the vascular mechanism; of the alimentary canal; of the organs of secretion, respiration and excretion.

In the second year, the work is made as practical as possible and includes the study of such advanced topics as metabolism, nutrition, dietetics, reproduction; the physiology of foetal life, of infancy, of maturity and of old age; and the functions of the brain, spinal cord and ganglionic system. Three hours each week, during the first semester, are occupied in laboratory work in physiological chemistry. This course affords the student a practical knowledge of the tissues and fluids of the body from a chemical standpoint. It embraces studies in the several classes of proteids, in fats, carbohydrates, bone, muscle, blood, milk, the digestive fluids, glycogen, etc.

A similar number of hours during the second semester are devoted to experimental physiology. For this work the class is divided into sections and the instruction is individualized so far as possible. The student is familiarized with physiological apparatus and its uses; with forms of electrical stimulation and with methods of experimentation; while his knowledge of physiological principles is strengthened by the observation of functional facts. The courses are illustrated by means of a series of charts, in oil and water colors, which picture the physiological anatomy, the mechanical relations and the biologico-chemical changes of the tissues.

In the fourth year, an optional course in practical dietetics is conducted during the first semester. It deals with the analysis of foods, with the general principles of food preparation and with the selection of a suitable dietary for the several periods of life.

A laboratory reference library is in process of collection, to which the advanced student will have access for collateral reading.

Course I. General physiology.

Lectures, recitations and demonstrations, dealing with the physiological chemistry of the human body; the physiological properties of the cell; the nutritive media; nervous mechanisms in general; the muscular tissues, the connective tissues and the epithelial tissues, as the structural bases of the animal body. Two hours a week, first semester, first year. PROFESSOR BEARD.

Course II. Systemic physiology.

Lectures, recitations and demonstratisns. This course includes the physiology of the vascular system; the digestive system; the respiratory system; the secretory and excretory systems. Four hours a week, second semester, first year. Open to those who have completed course i. PROFESSOR BEARD.

Semi-weekly recitations upon the subjects of the first year are conducted in sections of the class.

Course III. Advanced physiology.

Lectures, recitations and demonstrations. This course includes the discussion of the phenomena of metabolism; of nutrition; of temperature production, regulation and loss; of reproduction; of the physiological changes incident to successive periods of life; and of the functions of the nervous system. Two hours a week, first sem-

ester; three hours a week, second semester, second year. Open to those who have completed the courses in physiology of the first year. PROFESSOR BEARD.

Weekly recitations upon the subjects of this course are conducted in sections of the class.

Course IV. Physiological chemistry and microscopy.

Laboratory work. A practical study of the several classes of proteids; of carbohydrates, fats, bone, muscle and blood; of gastric juice, saliva, pancreatic juice, and bile in their respective digestions; of milk; of glycogen; and extractives. Microscopic study of the carbohydrates in vegetable and animal forms; of the physiological emulsions of fat; of crystalline waste products; and of the blood-cells and the process of fibrin formation. Practical instruction is given during this course in the enumeration of the blood-cells, in the estimation of hemoglobin and corpuscles in mass, in the spectroscopic examination of the blood and in the use of the polariscope. Nine hours a week, first semester, second year. Open to those who have completed courses i and ii. PROFESSOR BEARD AND DR. WILCOX.

Course V. Experimental physiology.

Laboratory work and demonstrations. A study of physiological apparatus, electrical stimuli and methods of experimentation; the demonstration of experiments which illustrate physiological function in the muscular, nervous, vascular, respiratory and glandular systems. Three hours a week, second semester, second year. Open to those who have completed course iv. PROFESSOR BEARD AND DR. WILCOX.

Course VI. Practical dietetics. (Optional.)

Lectures and laboratory exercises. A study of food analysis, food preparation and of the general principles of food selection. Two hours a week, first semester, fourth year. PROFESSOR BEARD AND DR. WILCOX.

Opportunity will be afforded, in the laboratories of physiology and physiological chemistry, for the pursuance of special courses of study, in both experimental and chemical physiology, under the direction of the chair.

Courses i and iv in animal biology in the college of science, literature and the arts will be accepted in lieu of first year physiology in the department of medicine.

CHEMISTRY.

The work in this subject is carried on in a building especially arranged for this work. The qualitative laboratory has a floor space of about 2300 square feet and accomodates 100 students at a time. It is used for instruction in general chemistry and analysis. It is well supplied with the usual apparatus. The quantitative laboratory has a floor space of about 1500 square feet, and accomodates 68 students at one time. It is used for instruction in the analysis of the urine, quantitative analysis and organic chemistry. The chemical lecture room is situated in Medical Hall.

Course I. General inorganic chemistry, including qualitative analysis. Lectures and recitations. 3 hours a week, first semester; 2 hours a week, second semester, first year. PROFESSOR BELL.

Laboratory work; qualitative analysis. 6 hours a week, first year, from October 15th to May 8th. PROFESSOR BELL AND MR. CAREL.

Course II. Analysis of urine and toxicology; chemistry of carbon compounds.

Lectures and recitations. 1 hour a week, first semester; 2 hours a week, second semester, second year. PROFESSOR BELL.

Laboratory work; analysis of the urine. 6 hours a week, second year, from October 15th to January 1st. PROFESSOR BELL AND MR. CAREL.

Courses I, II and III in chemistry in the school of technical and applied chemistry are accepted in lieu of first year chemistry in the department of medicine.

PATHOLOGY AND BACTERIOLOGY.

The laboratories of pathology and bacteriology occupy spacious quarters in the laboratory of medical sciences. A general laboratory, 44x70 feet, is well lighted by windows on three sides and a part of the fourth. Electric light for microscopic and general illuminating purposes is also provided. The arrangement is such that three students are grouped so as to have a sink, with gas, water and waste connection, and ample desk space next the windows. Six lockers, arranged beneath the table and on the walls, provide for apparatus, microscopes, etc., given at the beginning of the course to each student. Immediately behind and accessible to each student, are sterilizers, incubators, blow-pipes, etc. Cupboards, drawers, a large incubator, sinks, fume chambers, demonstration and distribution tables, complete the arrangement of the room.

A pathological preparation room flanks it upon one side, and the room of the demonstrator on the other. Adjoining the latter are the department library and the office and private laboratory of the professor of pathology and bacteriology. Adjoining this is the private laboratory of the professor of surgical and clinical pathology. Specimens illustrative of surgical pathology are here prepared and diagnostic work done.

In the basement of the building, the department has store rooms and a room where pathological animals are housed. Here too are equipped laboratories for bacteriology and experimental pathology, as well as a room in which all the culture media are made.

In the third story, immediately above and of the same size as the large laboratory, is a museum for the storage and exhibition of pathological specimens, while a preparation room for their reception and assorting adjoins it.

The hospitals of Minneapolis and St. Paul afford a large supply of material and frequent opportunities for post-mortem examinations.

MICROSCOPES.

An adequate equipment of microscopes with attachments, immersion lenses, etc., permits of the rental of an instrument to each student, at a cost of $2.00 per semester, whenever he is unprovided with one suitable for his purposes.

Course I. (*a*) *Bacteriology.*

Lectures and demonstrations. This subject will be treated not only from the aspect of pathology, but in its relation to hygiene and public health. The general scope of bacteriology, the classification of the various bacterial forms, the composition and manufacture of culture media, the methods of isolation and culture, the testing of various bactericidal materials, conditions, etc., will be studied until a thorough knowledge of technique is acquired, (so far as may be possible with non-pathogenic bacteria). The special study and comparison of the various pathogenic micro-organisms will then be systematically taken up. 2 hours per week, first semester, third year. PROFESSOR WESBROOK AND DR. WILSON.

(*b*) *Bacteriology.* Laboratory work, teaching the general principles of and familiarization with the making of culture media, the methods of culture isolation and the microscopic examination of stained and living bacteria, the testing of various antiseptics, etc.

The student will then be required to grow in the various media, for macroscopic and microscopic examination, all the important pathogenic bacteria, such as the pyogenic bacteria, B. anthracis, B. typhi abdominalis, B. coli commune, Vibro

choleræ, B. diphtheriae, B. tuberculosis, etc. Materials and tissues from men and animals, containing these and other bacteria, will be provided for diagnosis, and the isolation of the bacteria in pure culture, where practicable. Parallel study of micro-organisms which might be mistaken for these, will also be pursued. Bacteriological diagnosis, in its relation to clinical diagnosis and public health, will be especially dwelt upon. Nine hours a week, for the first twelve weeks of the first semester, third year.

PROFESSOR WESBROOK, DR. WILSON AND DR. WHITE.

Course II. (*a*) *General pathology.*

Lectures, demonstrations and laboratory work on the general processes involved in disease. Bacteriology and its etiological relation is taught concurrently (see above). The general considerations of tumors will be omitted, since it is fully dealt with in the course on surgical pathology and special pathology.

(*b*) *General pathology* 2 hours a week, first semester, third year.
Laboratory work, particularly on the history of inflammation, (largely experimental) degenerations, etc. Nine hours a week for four weeks at the end of first semester, third year. PROFESSOR WESBROOK, DR. WILSON AND DR. WHITE.

Course III (*a*) *Special pathology.*

Lectures and demonstrations, The special study of the pathological processes occurring in the blood, vascular and lymphatic systems, lungs, liver, kidneys, alimentary canal, etc., will be taught by the demonstrations of fresh tissues and preserved specimens from the pathological museum. Three hours a week, second semester, third year. PROFESSOR WESBROOK AND DR. WHITE.

(*b*) *Special pathology.* Practical laboratory work, in which the students will be required to mount and examine under the microscope selected, fresh and stained specimens of morbid tissues, fluids, etc. The microscopic and chemical study of such materials as pathological blood, sputum, urine, contents of alimentary canal, etc., and the application of laboratory methods to clinical diagnosis will form an important part of this work, and will be taken up at the completion of the study of the morbid condition in each organ or system. The animal parasites will also receive attention. The histology of the various tumors will be fully given and students will be provided with specimens for staining, remounting and examination. Nine hours a week, second semester, third year.

PROFESSOR WESBROOK, DR. WILSON, DR. HEAD AND DR. WHITE.

(*c*) *Special pathology.* Autopsies and post-mortem technique. Students will have an opportunity of personally taking part in this work, under the direction of the pathologist in charge, in the hospitals of Minneapolis and St. Paul. A knowledge of the technique of post-mortem work and of morbid anatomy will be thus afforded. Throughout the third and fourth years.

PROFESSOR STEWART AND DR. ROTHROCK.

Course IV, Surgical pathology.

(See principles of surgery). This course will consist of lectures and laboratory demonstrations and will cover the general subject of the pathological and bacteriological bases of surgery. The lectures will be illustrated by charts and diagrams, by fresh and preserved specimens, and, so far as practicable, demonstrations will be given of the various processes and of the bacteria concerned. Especial attention will be given to inflammation and its complications, to the infectious diseases of surgical importance and to tumors. 2 hours a week, first semester, third year, and 3 hours a week, second semester, fourth year. PROFESSOR STEWART.

TEXT-BOOKS AND COLLATERAL READING.

The following text-books are preferred by the faculty. Reference works are suggested, also, for collateral reading:

Medical Dictionaries.

Gould's Medical Dictionary.
Dunglison's Medical Dictionary.
Duane's Medical Dictionary.

Histology.

First year—
Wilson's The Cell.
Piersol's Histology.
Stöhrs Histology.
Quain's Anatomy, 10th Ed. Vol. **I, Pt. II.**
Schæfer's Histology.
Parker's Biology.

Second year—
Piersol's Histology.
Quain's Anatomy, Vol. III, Pts. I, III and IV.

Collateral reading—Kölliker's Gewebelehre Pts. I and II; Duval's Précis d' Histologie; Ranvier's Traite d' Histologie; Böhm u Davidoff's Histologie; Behren's Kossel u Schiefferdecker's Gewebelehre; Klein's Histology; O. Hertwig's The Cell; Lee's Microtomist's Vade Mecum; Stirling's Practical Histology; Willey's Amphioxus, etc.; Thomson's Zoölogy; Huxley & Martin's Biology; Davenport's Experimental Morphology.

Embryology.

Minot's Embryology.
Hertwig-Mark's Embryology.
Marshall's Vertebrate Embryology.

Collateral reading—Kölliker's Enlwicklungsgeschichte; Prenant's Embryologie; Schenk's Embryologie; O. Schultze's Embryologie.

Anatomy.

First year—
Quain's Anatomy, 10th edition, Vol. II, Pts. I and II.
Gray's Descriptive and Surgical Anatomy.

Second and third years—
Quain's Anatomy, 10th edition.
Morris' Text-Book of Anatomy.
Gray's Anatomy.
Holden's Practical Anatomy.
Hayne's Manual of Anatomy.
Holden's Manual of Dissections.
Treve's Applied Anatomy.

Collateral reading—Flower's Osteology of Mammals; Gegenbauer's Elements of Comparative Anatomy; Chauveau's Comparative Anatomy; McClellan's Regional Anatomy; Ranney's Applied Anatomy of the Nervous System; Meynert's Psychiatry, Part I: anatomy, physiology and chemistry of the brain.

Physiology.

First and second years—
Foster's Physiology, sixth edition.
Howell's American Text-Book of Physiology.
Stirling's Practical Physiology.
Burdon-Sanderson's Handbook of Physiological Laboratory.
Waller's Human Physiology.

Collateral reading—Landois and Stirling's Handbook of Physiology; Chapman's Physiology: Stewart's Practical Physiology; Yeo's Physiology, Martin's Human Body.

Chemistry.
Second year—
Tyson's Examination of Urine.
Reese's Toxicology.

Materia medica and therapeutics.
First year—
Pharmacopoea of the American Institute of Homeopathy.

Second year—
Hughes' Pharmaco-Dynamics.

Third and fourth years—
Farrington's or Cowperwaite's Materia Medica, Hahnemann's Organon.

Reference books — Third and fourth years — Allen's Hand Book, Hering's Condensed Materia Medica, Dunham's Lectures.

Pathology.
Ziegler's General and Special Patholgy.
Stanglo Text Book of Pathology.

Collateral reading—Hamilton's Text-book of Pathology; Delafield and Prudden's Hand-book of Pathological Anatomy and Histology; Woodhead's Practical Pathology; Weichselbaum's Elements of Patholegical Histology; Boyce's Morbid Histology.

Surgical pathology.
Park's Surgery, Vol. I.

Collateral reading—Warren's Surgical Pathology; Senn on Tumors; Bowlby's Surgical Pathology; Tillman's Principles of Surgery and Surgical Pathology; Watson Cheyne's Tuberculosis of Bones and Joints.

Clinical microscopy.
Von Jaksch's Clinical Diagnosis.
Simon's Clinical Diagnosis.

Collateral reading—Lenhartz "Mikroskopie u Chemie am Krankenbett;" Limbeck "Grundriss e Klinischen Pathologie d. Blutes."

Bacteriology.
Abbott's Principles of Bacteriology.
Kanthack and Drysdale's Practical Bacteriology.

Collateral reading—Sternberg's Manual of Bacteriology; Fraenkel's Bacteriology; McFarland's Pathogenic Bacteria; Woodhead's Bacteria and their Products.

Practice of Medicine.
Goodno's Practice.
Raue Therapeutics.
Lippe's Repertory.
Knerr's Repertory.
Pepper's System of Medicine.
DaCosta's Diagnosis.

Phyical Diagnosis.
Lilienthal's Therapeutics.
Lippe's Repertory,
Farrington's Clinical Materia Medica.
Vierodt's Medical Diagnosis.
Abrams' Manual of Clinical Diagnosis.
DaCosta's Diagnosis.

Surgery.

Park's Surgery.
Homeopathic Text Book of Surgery.
Moulin's American Text Book of Surgery.
Bradford & Lovett, Orthopaedic Surgery.
Pye's Surgical Handicraft.

Skin and Genito-urinary Diseases.

Skin—Kippax, Hyde, Pye-Smith.
Genito-Urinary—Doughty, Carlton.

Obstetrics.

Leavitt.
Lusk's Midwifery.
American Text-book of Obstetrics.
American System of Obstetrics.
Grandin and Jarman's Midwifery.
Playfair's Midwifery.
Boisliniere, Obstetric Accidents, etc.
Davis' Obstetrics.

Gynecology.

Wood, Text Book of Gynecology

Ophthalmology.

Norton, Buffum, Swanzy, Noyes.
Collateral reading—Fuch's Diseases of the Eye.

Otology and Rhinology.

McBride, Burnett, Ivins, McDonald, Bosworth.

Nervous and mental diseases.

Worster on Insanity.
Clouston Mental Diseases.
Edinger's Anatomy of Central Nervous System.
Martin's Nervous Diseases.
Dana Text-book Nervous Diseases.
Bigelow's System of Electro-therapeutics.
Mill's The Nervous System and its Diseases.
Collaterateral Reading—Hack Tuke's Dictionary of Psychological Medicine; Bevan Lewis' Mental Diseases; Kirchoff's Handbook of Insanity; Ferrier's Localizations of Cerebral Diseases; Strumpell's Text-book of Medicine; Hirt's Diseases of the Nervous System; Horsley's Brain and Spinal Cord.

Diseases of children.

Tooker's Diseases of Chiidren.
Holt's Diseases of Children.
Fisher's American Text-book of Diseases of Children.
Collateral reading—Cyclopedia of Diseases of Children.

Hygiene.

Coplin and Bevan's Practical Hygiene.
Parke's Hygiene.
Collateral reading—Richardson's Preventative Medicine; Buck's Hygiene and Public Health.

Medical jurisprudence.

Taylor's Medical Jurisprudence.
Chapman's Medical Jurisprudence.
Collateral reading—Hamilton's American System of Legal Medicine; Withaus' and Becker's Medical Jurisprudence and Toxicology; Wharton and Stille's Medical Jurisprudence.

BOTANY.

All students are required to take this course who have had sufficient training in this subject to satisfy the requirements of the chair of materia medica. Lectures, recitations and laboratory exercises. The structure and functions of the vegetative organs of plants, roots; stems and leaves are first discussed, with an outline of plant histology, a consideration of the cell and principal tissues. There are next considered the main facts of plant physiology; the chemical processes in the plant; the various products of metabolism; their function in the plant economy and their economic and medicinal value. The morphology and physiology of flowers, fruits and seeds are studied; it is pointed out how these and other parts of plants come to be of medicinal importance. The principles of scientific nomenclature are briefly set forth, with a discussion of broad lines of classification. A brief account is given of some of the more important plant families, with special reference to plants of medicinal value. Freshman year, first semester.

All communications pertaining to the college of homeopathic medicine and surgery should be addressed to the Dean, A. P. Williamson, M. D., No. 602 Nicollet Avenue, Minneapolis, Minn.

Students

COLLEGE OF HOMEOPATHIC MEDICINE AND SURGERY.

FOURTH YEAR CLASS—4.

Albert E. Booth, Minneapolis.
Arthur T. Caine, Stillwater.
Glenn R. Matchan, Minneapolis.
Wesley G. Matchan, Zumbrota.

THIRD YEAR CLASS—7.

Oscar Bertleson, Fergus Falls.
Ferdinand Gramenz, Posen, Germany.
Herman A. Hartung, Cottage Grove.
Clifford C. Leck, Owatonna.
Charles M. Niles, Fergus Falls.
Edwin H. Smith. Minneapolis.
—Annah Hurd, Phm. D., Minneapolis.

SECOND YEAR CLASS—5.

H. Gray Bickford, Maine.
Roy E. Mitchell, Porter's Mills, Wis.
William B. Roberts, B. S., Minneapolis.
Hugh J. Turnstead, Minneapolis.
Paul Wallace, St. Paul.

FIRST YEAR CLASS—4.

Earl Hall, Eau Claire, Wis.
Fred D. Rogers, St. Paul.
Norman M. Smith, Monticello, Ia.
Ella Suydam, St. Paul.

SPECIALS—2.

Carl V. Cole, Fergus Falls.
Harry E. Sutton, Minneapolis.

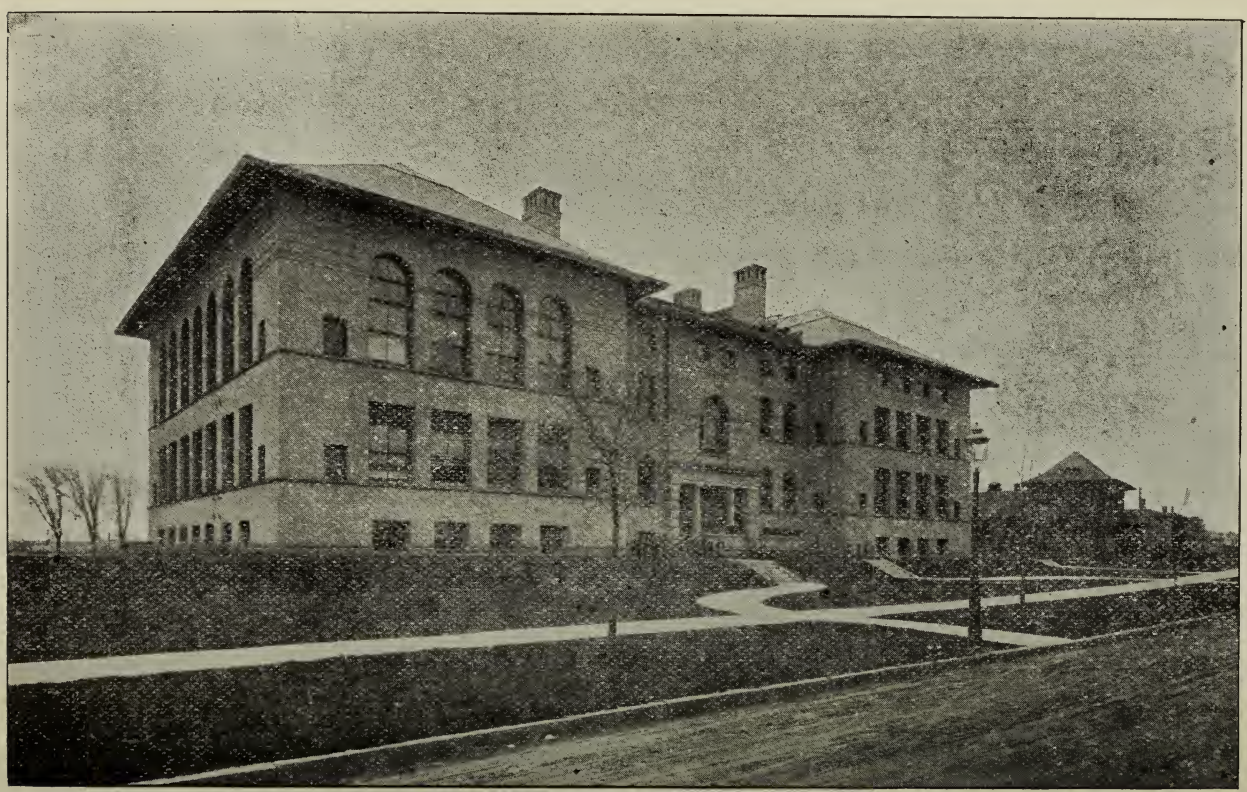
Calendar

1898.

SEPTEMBER	19th.	Entrance examinations.
	20th.	Condition examinations.
	23d.	Classification of students.
	26th.	Opening address.
	25th.	Lectures begin.
NOVEMBER	30th.	THANKSGIVING DAY.
DECEMBER	23d.	Christmas holidays begin.

1899.

JANUARY	9th.	Work resumed.
	21st.	First Semester ends.
22d to Feb.	2d.	Mid-term examinations.
FEBRUARY	6th.	Second Semester begins.
	12th.	LINCOLN'S BIRTHDAY—Holiday.
	22d.	WASHINGTON'S BIRTHDAY—Holiday.
APRIL	10th.	HAHNNEMANN'S BIRTHDAY—Holiday,
MAY	19th.	Second Semester ends.
	21st.	Examinations.
	30th.	MEMORIAL DAY.
JUNE	7th.	Commencement Day.



Laboratory of Medical Sciences.

L'ETOILE DU NORD
1851
THE UNIVERSITY OF MINNESOTA
1868

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1900
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THE UNIVERSITY OF MINNESOTA

BULLETIN

Vol. 3 MAY 15, 1900 No. 6

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The University Bulletins are issued every six weeks, during the University year, at least six numbers every calendar year. Entered at the Postoffice in Minneapolis as second-class mail matter.

MINNEAPOLIS, MINN.

The University Bulletins are published by authority of the Board of Regents, six times a year,—every six weeks during the University year. Bulletins will be sent gratuitously, postage paid, to all persons who apply for them. In calling for bulletins, please state department of the University concerning which you desire information. Address

THE REGISTRAR,
The University of Minnesota,
Minneapolis, Minn.

The University

THE UNIVERSITY OF MINNESOTA comprises the following named colleges, schools and departments:

THE GRADUATE DEPARTMENT.

THE COLLEGE OF SCIENCE, LITERATURE AND THE ARTS.

The School of Technical and Applied Chemistry.

THE COLLEGE OF ENGINEERING AND THE MECHANIC ARTS.

THE SCHOOL OF MINES.

THE COLLEGE OF AGRICULTURE.

The School of Agriculture.

The Dairy School.

THE COLLEGE OF LAW.

THE DEPARTMENT OF MEDICINE, composed of colleges as follows:

The College of Medicine and Surgery.

The College of Homeopathic Medicine and Surgery.

The College of Dentistry.

The College of Pharmacy.

The Regents of the University have also entrusted to their charge

THE EXPERIMENT STATION;

THE GEOLOGICAL AND NATURAL HISTORY SURVEY.

THE GRADUATE DEPARTMENT. In each of the colleges, except that of medicine, there are advanced courses of study leading to second degrees. These courses are open to graduates of any reputable college upon presentation of diploma.

In the COLLEGE OF SCIENCE, LITERATURE AND THE ARTS there are four four-year courses of study, the classical, scientific, literary and civic. The classical course offers for its leading studies the Greek and Latin languages; the scientific course, the natural and physical sciences; the literary course, the modern languages; the civic course, history and philosophy. The completion of the courses leads respectively to the degrees: bachelor of arts, bachelor of science, bachelor of literature, and bachelor of philosophy. The advanced degrees offered in this college are: master of arts, science, literature and philosophy, and doctor of philosophy.

The School of Technical and Applied Chemistry, leading to the degree of bachelor of science, is also organized as a part of this college.

A Summer School for Teachers. A four weeks' course of instruction is offered, in various University subjects, for those whose school duties prevent them from taking the regular University courses.

THE COLLEGE OF ENGINEERING AND THE MECHANIC ARTS offers courses of study, of four years each, in civil, mechanical and electrical engineering; leading to the degrees of civil, mechanical and electrical engineer. This college offers a four years' course of study in science and technology leading to the degree of bachelor of science, with an additional year leading to the engineer's degree in the various lines offered in the college. This college also offers graduate work leading to the degree master of science.

THE SCHOOL OF MINES offers a four years' course of study in mining and metallurgy; upon the completion of which the degrees engineer of mines and metallurgical engineer are conferred.

THE COLLEGE OF AGRICULTURE offers a regular course in agriculture of four years college work; the degree of bachelor of agriculture is conferred on completion of the course.

THE SCHOOL OF AGRICULTURE is open to both men and women, and is a training school for practical farm life and in domestic economy. The college of agriculture is open to graduates of this school.

A Dairy School offers practical instruction in dairying to those who have had some experience in conducting a dairy.

THE COLLEGE OF LAW offers a three years' course of instruction, leading to the degree of bachelor of laws. There is an evening class in this college leading to the same degree. This college offers graduate work leading to the degrees, master of laws, and doctor of civil law.

THE COLLEGE OF MEDICINE AND SURGERY and THE COLLEGE OF HOMEOPATHIC MEDICINE AND SURGERY each offers a four years' course of study, of 8½ months each; upon completion of the prescribed course the degree doctor of medicine is conferred.

THE COLLEGE OF DENTISTRY offers a three years' course of study of nine months each; upon completion of the prescribed course the degree of doctor of dental medicine is conferred.

THE COLLEGE OF PHARMACY offers a two or three years' course of study, leading to the degree of pharmaceutical chemist. This college also offers graduate work leading to the degrees, master of pharmacy, and doctor of pharmacy.

SPECIAL COURSES. In each of the colleges, students, of an advanced age and adequate preparation, are permitted to pursue, under the direction of the faculty, one or two distinct lines of study.

Bulletins of any department sent free to any address, upon application. The full catalogue will be sent only upon receipt of ten cents to cover postage. Address,

THE REGISTRAR,
University of Minnesota,
Minneapolis, Minn.

Medical Hall.

Board of Regents

The HON. JOHN S. PILLSBURY, MINNEAPOLIS,	*Regent for Life*
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The HON. JOHN LIND, NEW ULM, The Governor of the State.	*Ex-Officio*
The HON. JOHN H. LEWIS, B. A., HASTINGS, The State Superintendent of Public Instruction.	*Ex-Officio*
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*The HON. ALPHONSO BARTO, ST. CLOUD,	1902
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The REV. SAMUEL G. SMITH, D. D., ST. PAUL,	1904

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PRESIDENT CYRUS NORTHROP, LL. D., *Corresponding Secretary.*

STEPHEN MAHONEY, B. A., *Recording Secretary.*

JOSEPH E. WARE, *Treasurer.*
(St. Anthony Falls Bank.)

*Deceased.

Calendar for 1900-1901

1900. 1901.

JULY

S.	M.	T.	W.	T.	F.	S.
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APRIL.

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Calendar.

FIRST SEMESTER.

SEPTEMBER	18th.	Registration and assignment of seats.
		Entrance examinations, 9 a, m. and 2 p. m.
	19th.	Entrance examinations, 9 a. m.
		Examinations for conditions and advanced standing, 9 a.m. and 2 p.m.
	20th.	Entrance examinations, 9 a. m.
		Examinations for conditions and advanced standing, 9 a.m. and 2 p.m.
	22d and 24th.	Classification of students.
	24th.	Opening lecture.
	25th.	Lectures and laboratory courses begin.
NOVEMBER	30th.	THANKSGIVING DAY.
DECEMBER	22d.	Holiday vacation begins.
	25th.	CHRISTMAS DAY.
JANUARY	1st.	NEW YEAR'S DAY.
	8th.	Work resumed.
	26th.	First semester ends.
	21st to Feb. 1st.	Examinations in first, second and third year branches.
FEBRUARY	5th.	Second semester begins.
	12th.	LINCOLN'S BIRTHDAY—Holiday.
	22d.	WASHINGTON'S BIRTHDAY—Holiday.
APRIL	10th.	HAHNEMANN'S BIRTHDAY—Holiday.
MAY	18th.	Second semester ends.
	20th.	Final examination begins.
	30th.	MEMORIAL DAY.
	31st.	Annual meeting of the faculty.

COMMENCEMENT WEEK.

SUNDAY,	JUNE 2d,	BACCALAUREATE SERVICE, - - - 3:00 p. m.
MONDAY,	JUNE 3rd.	SENIOR CLASS EXERCISES—Announcement by the class.
WEDNESDAY,	JUNE 5th.	ALUMNI DAY.
THURSDAY,	JUNE 6th.	COMMENCEMENT DAY—The Twenty-ninth Annual Commencement.
		Graduation Exercises, - - - - 9:00 a. m.
		Alumni Banquet and President's Reception, - 1:00 p. m
FRIDAY	JUNE 7th.	SUMMER VACATION BEGINS.

College of Homeopathic Medicine and Surgery.

THE FACULTY.

CYRUS NORTHROP, LL. D., *President.*
ALONZO P. WILLIAMSON LL. B., M. D., *Dean, and Professor of Mental and Nervous Diseases and Medical Jurisprudence.*
WILLIAM E. LEONARD, A. B., M. D., *Professor of Matrria Medica and Therapeutics.*
GEORGE E. RICKER, A. B., M. D., *Professor of Clinical Medicine and Physical Diagnosis*
ROBERT D. MATCHAN M. D., THOMAS J. GRAY, M. D., } *Professors of Principles and Practice of Surgery.*
WARREN S. BRIGGS, B. S., M. D., MARSHALL P. AUSTIN, M. D., } *Professors of Clinical and Orthopædic Surgery.*
B. HARVEY OGDEN, A. M., M. D., *Professor of Obstetrics.*
EUGENE L. MANN, A. B., M. D., *Professor of Diseases of Nose, Throat and Ear.*
FREDERIC M. GIBSON, M. D., O. et A. Chir., *Professor of Ophthalmology.*
GEORGE E. CLARKE, Ph. B., M. D., *Professor of Theory and Practice of Medicine.*
GEORGE F. ROBERTS, M. D., EDWARD E. AUSTIN, M. D., } *Professors of Diseases of Women.*
HARRY M. LUFKIN, M. D., *Professor of Diseases of Children.*
THOMAS J. GRAY, M. D., *Professor of History and Methodology of Medicine.*
ROBERT R. ROME, M. D., *Professor of Clinical Obstetrics.*
————————, *Professor of Skin and Genito-urinary Diseases.*
O. K. RICHARDSON, B. S., M. D., *Lecturer on Life Insurance Examination.*
EDWARD M. FREEMAN, B. S., *Instructor in Botany.*
EDWIN H. SMITH, *Dispensary Assistant.*
E. A. BOOTH, *Lecturer on Surgical Emergencies.*
E. A. COMSTOCK, *Lecturer on Clinical and Orthopædic Surgery.*

Instruction in the following branches is received in common with the students of the other colleges in the department of medicine:

CHARLES A. ERDMANN, M. D., *Acting Professor of Anatomy.*
RICHARD O. BEARD, M. D., *Professor of Physiology.*
CHARLES J. BELL, A. B., *Professor of Chemistry.*
JOHN F. FULTON, Ph. D., M. D., *Professor of Hygiene.*
THOMAS G. LEE, B. S., M. D., *Professor of Histology and Embryology.*
F. F. WESBROOK, M. A., M. D., C. M., *Professor of Bacteriology and Pathology.*

Dispensary Building.

The Department of Medicine.

THE DEPARTMENT OF MEDICINE INCLUDES THE FOLLOWING NAMED COLLEGES:

The College of Medicine and Surgery.
The College of Homeopathic Medicine and Surgery.
The College of Dentistry.
The College of Pharmacy.

Each college is distinct in the government of its internal affairs, has its own faculty and an independent curriculum, excepting in the studies of anatomy, physiology, chemistry, histology and embryology. These studies, so far as they are required in each course, are pursued by all the students of the department in common.

BUILDINGS AND EQUIPMENT.

The department is resident in four buildings situated upon the University campus, viz: Medical hall, the laboratory of medical sciences, the laboratory of chemistry and the laboratory of anatomy.

Medical hall contains the offices of the deans of the college of medicine and surgery, of the college of homeopathic medicine and surgery and of the college of dentistry; the large amphitheatre and lecture rooms of the severa colleges, the library and reading room of the department, the laboratories of anatomy and materia medica, the operating-rooms and laboratories of dentistry and the dental infirmary.

The laboratory of medical sciences is a building especially designed for laboratory uses. One wing of the building is occupied by the college of pharmacy and the department of physiology. It contains the office and private laboratory of the dean of the college of pharmacy, the pharmaceutical and botanical laboratories. the laboratory of organic chemistry, with preparation and stock rooms. The office of the secretary of the college of medicine and surgery, a large lecture amphitheatre, especially arranged for demonstrative work, the laboratories of physiology, physiologic chemistry, practical dietetics, and operative surgery are also situated in this wing.

The center and opposite wing are occupied by the departments of histology and embryology, pathology and bacteriology. Each of these branches has its well-lighted laboratories, preparation-rooms and private study rooms.

Upon the basement floor, are laboratory stock-rooms and the animal rooms devoted to physiologic and bacteriologic purposes.

A large laboratory upon the first floor is assigned to the bacteriological work of the State Board of Health.

The laboratory of chemistry is a one-story brick building devoted entirely to the use of this department. It is equipped with laboratories, preparation-rooms, store-rooms, and the private offices of the professor and assistant professor of chemistry.

The laboratory of anatomy is a new two-story and basement building, 35x60 feet. In the basement are the morgue, injecting room, cold storage vaults and engine and apparatus for the anhydrous ammonia freezing plant. On the first floor are an amphitheatre, seating one hundred students, the private offices of the professors and instructors, a private dissecting room and a small laboratory for research work. The entire second floor is devoted to laboratories for practical work in anatomy.

A new clinical building has also been put up and equipped during the past season. It is situated in a part of the city most favorable to the development of an out-door service and, at the same time, accessible to the students. It is of two-stories and covers 40x150 feet. It affords ample floor space for amphitheatres, waiting rooms, pharmacy and class-rooms for each of the clinical branches. Wards and laboratories, in which section work in medical and surgical diagnosis can be conducted, have been equipped.

The department of medicine is in intimate relationship, through its several faculties, with the hospitals, infirmaries and dispensaries of the cities of Minneapolis and St. Paul. Through these agencies it utilizes, for the benefit of its students, the clinical material of these two large centers of population. The location of the University near the interurban car line enhances the value and convenience of these clinical opportunities.

A medical library, containing some two thousand volumes and supplied with current periodicals, is open to all the students of the department. The collection has been chosen with special regard to the need for reference work and collateral reading. The general library of the University and the public libraries of Minneapolis and St. Paul are also open to the students of this department.

The College of Homeopathic Medicine and Surgery.

RULES AND REGULATIONS OF THE DEPARTMENT.

COLLEGE YEAR.

The thirteenth annual course of study in this department will begin on September 18th, 1900, and will continue eight and one-half months, closing upon the first Thursday in June, 1901. The college of dentistry, in this department, will begin work September 4th and the college of pharmacy October 2nd.

The college year is divided into semesters; the first semester ending January 26th, 1901. The succeeding week will be devoted to mid-year examinations which will be conducted in many of the departments. The second semester will begin February 5th, 1901, and will close May 20th, 1901, when the final examinations of the year will begin. Commencement exercises will occur in common with the other departments of the University, during the week ending June 6th, 1901.

ENROLLMENT.

It is desirable that students matriculate before September 8th.

Students will be assigned seats in the order of and at the time of their matriculation. Such matriculation and assignment of seats will be had in the office of the registrar of the University. Students will then present themselves for entrance examination, or for the approval of their evidences of preliminary qualification, to a committee of the college of science, literature and the arts appointed for this purpose. Having received an entrance certificate from this committee they will report to the dean of the college which they desire to enter, for admission and classification. They will then be furnished with a record of their standing and of the studies to be taken and they will be required to present this record to the professors in charge of such studies within the first week of the term.

ENTRANCE EXAMINATIONS.

In accordance with an agreement between the University of Minnesota and Hamline University, the requirements for admission to their medical departments, which represent all the medical schools of the state, are, at present, uniform.

During the sessions of 1900-01 and 1901-02 students will be admitted to this college upon passing the regular entrance examinations to the colleges of science, literature and the arts, as unified by the presidents of the University of Minnesota and Hamline University. The subjects of examination are:

English composition and rhetoric, one year.
Physics, one year.
Physiology, elementary course.
United States history, one year.
History of Greece and Rome, one-half year.
Algebra, elementary, one year.
Geometry, plane, one year.

Latin Grammar, one year: Cæsar, four books; Cicero, four orations Vergil, four books.

German or French, two years, or one year of each, will be accepted in lieu of Cicero and Vergil.

Graduates of any Minnesota State high school will be admitted **without examination, provided—**

(1) That the school maintain a **full four-year course** of high school work.

(2) That the applicant present to the Dean the principal's certificate showing the satisfactory completion **of all the studies required for admission.**

(3) No student will be admitted **if conditioned in more than two subjects.**

Graduates of the **advanced courses of Minnesota Normal Schools** will be admitted upon the same terms as graduates of State high schools. Any Minnesota high school or academy **not under supervision of the State High School Board,** but requiring for graduation **a four-years' course,** exclusive of the common school branches, conforming **essentially in distribution of time** to the entrance requirements of this college, **may be accredited by the faculty** in all respects as are the State high schools.

Graduates from schools in other states, whose diplomas admit to **reputable colleges,** will be received, subject to the regulations tnat apply to graduates of Minnesota State high schools.

CONDITIONS.

Examinations of conditioned students and of applicants for advanced standing, in the common studies of the first and second years, will be held in these branches upon the following dates:

September 19, 9 a. m. Anatomy, first year; Physiology, second year.
September 19, 2 p. m. Histology, first year; Chemistry. second year.
September 20, 9 a. m. Physiology, first year; Anatomy, second year.
September 20, 2 p. m. Chemistry, first year; Histology, second year.

Conditions may also be removed at the close of each semester.

Candidates for graduation who carry conditions in studies of previous years must remove these conditions at the end of the first semester in order to be eligible for final examinations.

Students who carry conditions into a succeeding year may find a resultant conflict of study hours. In that event they will give preference to the unfinished studies of the lower conflicting course.

CLASSIFICATION.

September 22d and 24th will be devoted to the classification of students. The opening lecture of the course will be delivered at 8 p. m., September 24th.

STANDING.

The standing of students is determined by the results of recitations, written examinations and laboratory work. It is indicated by the terms "passed" or "conditioned." Conditions may be removed as indicated above. Incomplete work must be made up before the final examinations of the fol lowing year.

Students must pass a majority of the studies of their year in order to classify in the next succeeding year.

In the studies of the first and second years, the classes will recite in sections during hours regularly assigned for this purpose.

Habitual absence without a satisfactory excuse, continued indifference to study, or persistently poor scholarship may subject the student to temporary or permanent suspension.

ADVANCED STANDING.

Applicants for advanced standing must pass the entrance examinations, or present the usual equivalents. They must furnish satisfactory evidence of time spent and subjects covered in previous professional studies and must present themselves at the above dates and pass the examinations in all branches in which they wish to be exempt, excepting under the conditions of collegiate study stated below.

No conditions of advanced standing will entitle the student to take the two years of any graded study coincidently.

Students will not be permitted to substitute private work in any branch for the regular college course work, excepting in the case of actual laboratory exercises done under the direct supervision of an instructor appointed by the chair and approved by the faculty. Examinations in such private laboratory work will be conducted by the chair. This rule does not apply to conditioned students.

Seniors in the college of science, literature and the arts, who contemplate entering the department of medicine, are permitted to elect courses in anatomy, histology and embryology, physiology and chemistry in this department in lieu of similar science courses in the college of science, literature and the arts. Since the medical practice act of this State requires four

full years of medical study, these students are encouraged to elect this work in the department of medicine. This election will be contributive toward the degrees given in both colleges. Reciprocally, however, the college of medicine and surgery will accept full courses, taken in the college of science, literature and the arts, in histology and embryology, physiology and chemistry in lieu of its first year's work in these branches.

For a statement of fees, either charged or credited in these elected studies, see below.

ATTENDANCE.

Students are required to attend four-fifths of the lectures in each course. This rule is not intended for the benefit of those who seek admission after the opening of the college year, but is designed to cover cases of sickness or unavoidable absence. It does not apply to laboratory courses which must be taken in full and must be entered, invariably, during the first week in which they begin.

TERMS OF TUITION.

The college has adopted a system of level fees, in which are included all charges of matriculation, lecture courses, laboratory courses*, dissections and graduation. These level fees are as follows:

For the first year	$100.00
For the second year	100.00
For the third year	80.00
For the fourth year	80.00

One-half of the annual fee will be payable when the student matriculates. The registrar's receipt for this portion of the fee will entitle the holder to take the entrance examinations and to classify. The second half will be payable at the opening of the second semester, February 5th, 1900. If the applicant fails to pass the entrance examinations, his fees will be returned by the registrar. Absence or failure to continue study will not entitle the student to return of fees, excepting in cases of special hardship, when application may be made to the executive committee of the Board of Regents.

A student who takes advanced standing will receive only a credit of five dollars upon his annual fee per semester of each laboratory course from which he may be exempt.

Senior students in the academic department of this University who elect first year studies in this college, during their senior academic year, will be admitted to each of such studies upon payment of a fee of fifteen dollars.

Students who are conditioned and fail to remove their conditions within one year will be charged an extra examination fee.

Senior conditioned students who re-enter for work in any succeeding year will be charged a matriculation fee of ten dollars.

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*In each semester a fee of $2.00 will be charged for the rental of a microscope in each course in which its use is required, provided the student is not supplied with a satisfactory instrument of his own It is an advantage for the student to possess a microscope.

BREAKAGE AND LOSS.

In each laboratory course the student will be assigned a certain amount of apparatus and material, for which he will give a receipt.

For apparatus and material attaching to his laboratory desk he will also be held responsible. At the end of each course, if such apparatus and material are restored in good condition, this receipt will be returned to him.

A deposit of five dollars will be made with the Registrar each year, by every student, at the time of enrollment, as *a caution fee*. This fee is intended to cover the cost of unnecessary damage in the college buildings and of breakage and loss oflaboratory apparatus and materials. It will be returned to the student at the close of each year, minus the cost of articles assigned to him, which are not returned in good condition, or of damage to college property for which he is individually responsible. If responsibility for such damage cannot be individually fixed, a pro rata charge upon all students will be made.

SPECIAL STUDENTS.

Special students will pay to the registrar a fee of twenty dollars per year for each study they elect to pursue. They will be charged fees, varying from five to twenty dollars, for each laboratory course they may enter.

Graduate students will pay an admission fee of ten dollars which will entitle them to attend any lectures they may desire in regular courses, but such attendance does not entitle them to any credits unless they pass the required entrance examination.

Senior students who fail to graduate by reason of conditions will be charged a registration fee of ten dollars.

CURRICULUM.

The course in the college of homeopathic medicine and surgery leads to the degree of doctor of medicine. It covers a period of four years of collegiate study, each year representing eight and one-half months in actual residence.

The studies are graded, so far as practicable, throughout the four years and this grading is arranged with careful reference to the relation which the subjects naturally bear to each other.

The work of the first two years deals with the so-called scientific or laboratory branches; while that of the last two years includes the principles and practice of medicine and surgery, their associated specialties and the application of scientific or laboratory methods to clinical experience.

DEGREES.

The degree of doctor of medicine is conferred by the Board of Regents upon students who are commended, by vote of the faculty, for graduation.

Candidates for the degree must possess the following essential qualifications:

(1) Twenty-one years of age and upwards.

(2) Good moral character.

(3) A degree of preliminary education equivalent to that demanded by the examination for entrance to this college.

(4) Four full college years spent in the study of medicine; the fourth year, at least, in this University, and the remainder in this or other recognized college of medicine.

(5) Satisfactory examinations passed in all branches in accordance with the foregoing rules.

ANNOUNCEMENT.

The College of Homeopathic Medicine and Surgery offers special advantages to all students seeking a medical education. Through the generosity of the State, an equipment of buildings, laboratories and apparatus is provided, equal to that of the best medical schools in this country or in Europe. With this equipment it is possible to lay that broad foundation for a medical education, without which no physician can hope for the highest success. An institution deficient in the requirements for teaching the fundamental branches of medical practice cannot long maintain the confidence of the medical profession. The claim once made that homeopathic medicine could be mastered in a few months study of materia medica and symptomatology, no longer meets the demands of an intelligent patronage. Homeopathy, as an expanding science, draws toward itself as a part of its rightful possession, every addition to medical knowledge that can be of any service in the cure of the sick. The homeopathic physician should feel that he is the "heir of all the ages" in medical learning, having that catholicity of training which places at his command every known resource, including as his especial advantage, the added power of coping with disease, that comes from his knowledge of the science of homeopathy.

The breadth of view this result implies as provided in the college of homeopathic medicine and surgery in a real university course of study in, first: the history of medicine, botany, chemistry (organic and inorganic), histology, embryology, bacteriology, pathology, anatomy, physiology, hygiene and sanitary science, with all the accessories of laboratory work; second: in building upon this foundation a comprehensive knowledge of therapeutics, practice and surgery. The student has daily training in both the practical and theoretical aspects of medicine. In the first two years the practical training is provided in constant individual work in the laboratories or dissecting rooms; in the last two in a broad field of clinical study and observation, in both medical and surgical cases, which the nearly one-half million population of the twin cities abundantly supplies. The theoretical work is carried on in daily didactic lectures and text-book study throughout the entire course.

Especial emphasis is placed upon clinical instruction in both dispensary and hospital practice. Senior students will have opportunity to attend outdoor patients, assist in special and general operations, and to attend obstetrical cases during the last course of lectures.

The college has now fairly passed the formative experiences incident to the early life of institutions and has become an integral part of the educational and professional forces of the state. Its alumni now at work in the state, are the evidence of the character of its work. The loyal support of the profession throughout the northwest has encouraged and upheld the faculty in giving form to this new phase of the state work.

The college proposes to stand for a broad catholic, scientific, and therefore homeopathic, education in medicine and surgery.

EXAMINATIONS.

Examinations will be conducted at the end of each year, upon subjects taught during the year, according to the schedule printed elsewhere. Attendance upon at least four-fifths of the lectures under each department is required in order that a student may be allowed to enter for final examination, or to receive a certificate of attendance. Ten per cent of the graduating class will be recommended to receive the degree of doctor of medicine, "*cum laude.*" The selection will be based upon the efficiency of the work of the student during the period of the entire course.

CLINICS.

Every member of the faculty (with two exceptions) is a clinical teacher. Thus each professor demonstrates the application of his didactic work.

DISPENSARY CLINICS.

The dispensary, located at 1808 Washington avenue south, offers unusual facilities to the student for individual examination of patients. The location is within easy access of those whose means compel them to ask dispensary assistance, and presents ample opportunity for the study of all forms of disease usually met with in practice. Patients present themselves in large numbers daily (more than six thousand prescriptions having been made during the last year), and are assigned to particular departments according to the nature of their diseases. The classes are so divided and arranged as to afford every student abundant opportunity to familiarize himself with the best methods of diagnosis and treatment of the various maladies, medical and surgical, with which the clinic abounds. The college clinics are conducted throughout the entire year. Students and practitioners are invited to attend them at all times.

DISPENSARY CLINICS.

SUBJECT.	CLINICIAN.	CLINIC DAYS.	DAYS IN ATTENDANCE.	HOURS.
DISEASES OF WOMEN	PROF. E. E. AUSTIN DR. F. L. BECKLEY	Monday	Monday and Thursday	1 to 2
NERVOUS DISEASES	PROF. WILLIAMSON	Monday	Monday and Friday	1 to 2
DISEASES OF THE EYE	PROF. GIBSON DR. E. E. HURD.	Tuesday	Tuesday and Saturday	1 to 2
DISEASES OE THE SKIN	PROF. LEONARD	Tuesday	Tuesday	1 to 2
DISEASES OF THE NOSE, THROAT AND EAR	PROF. MANN	Wednesd'y	Wednesday and Saturday	1 to 2
OBSTETRICS	PROF. ROME	Wednesd'y	Wednesday	1 to 2
SURGERY	DR. H. C. ALDRICH	Friday	Monday and Friday.	1 to 2
	PROF. GRAY	Friday	Tuesday	12 to 1
	DR. COMSTOCK	Saturday	Wednesday and Saturday	1 to 2
INTERNAL MEDICINE	PROF. RICKER	Friday	Friday	1 to 2
	DR. RICHARDSON		Monday and Thursday	12 to 1
	DR. HORNING		Tuesday and Saturday	1 to 2
DISEASES OF CHILDREN	PROF. LUFKIN DR. KOCH	Saturday	Saturday Tuesday and Thursday	1 to 2

HOSPITAL CLINICS.

The college has unusual advantages in hospital clinics. In addition to the call upon students to assist the various professors in private cases, regular clinics are provided in the city hospitals of both St. Paul and Minneapolis and in St. Luke's and St. Joseph's hospitals in St. Paul.

Each Monday is devoted to clinics held in one of these hospitals by a member of the faculty.

MINNEAPOLIS.

Oct. 1st, 15th and 29th, 1900.
Nov. 5th and 19th, 1900.
Dec. 3d, 17th and 31st, 1900.
Jan. 7th and 21st, 1901.
Feb. 4th and 18th, 1901.
March 4th and 18th, 1901.
April 1st, 15th and 29th, 1901.
May 6th and 20th, 1901.

ST. PAUL.

Oct. 8th and 22d, 1900.
Nov. 12th and 26th, 1900.
Dec. 10th and 14th, 1900.
Jan. 7th and 21st, 1901.
Feb. 11th and 25th, 1901.
March 11th and 25th, 1901.
April 8th and 22, 1901.
May 15th, 1901.

CITY HOSPITAL, MINNEAPOLIS.

The faculty of the college of homeopathic medicine and surgery is largely represented on the staff of this institution, where one-third of all the patients admitted are placed under their care.

Dr. G. R. Matchan and Dr. W. G. Matchan, of the last graduating class, were appointed internes during the past year.

CITY HOSPITAL, ST. PAUL.

This hospital likewise has a full staff of homeopathic physicians and surgeons which includes all the St. Paul members of the college faculty. Each member of the staff is on duty two months of the year and has charge of all cases coming into his department during that time and uses suitable ones for clinical purposes.

HOSPITAL APPOINTMENS.

Graduates for this college are eligible for appointment to the position of interne in the Minneapolis City, St. Paul City and County Hospitals and St. Joseph's Hospital, St. Paul. Also to the staff of the State Hospital for Insane at Fergus Falls.

ST. LUKE'S HOSPITAL, ST. PAUL.

This hospital has recently erected a new building thoroughly equipped with all modern facilities for caring for medical and surgical cases. It contains an amphitheatre in which clinical lectures are delivered. A number of the faculty are members of the visiting staff.

ST. JOSEPH'S HOSPITAL, ST. PAUL.

Through the addition to its staff of members of the college faculty, students have access to both the surgical and medical cases upon exactly the same footing as the other hospitals.

GENERAL REMARKS.

In all hospital work students are given special bedside instruction in diagnosis, in "taking the case," in prescribing, in surgical dressing, in the after care of patients and all forms of accessory treatment.

ACKNOWLEDGEMENTS.

In continuance of the custom established five years ago, an invitation was extended to members of the profession, not connected with the college, serving upon the staffs of the several hospitals of the two cities, to lecture or present clinical demonstrations to the students. The faculty desire to express its appreciation to the following physicians and surgeons for their generous acceptance of the invitation: Drs. Adele S. Hutchison, Pearl M. Hall and H. C. Aldrich, of the City Hospital staff, Minneapolis, and Drs. Henry Hutchinson and O. M. Hall, of the staff of the City and County Hospital, St. Paul, and St. Luke's Hospital, St. Paul. The faculty is also under obligations to Dr. O. K. Richardson, of Minneapolis, for a series of very valuable lectures on Life Insurance Examinations.

COURSE OF INSTRUCTION.

The extension of the course of instruction to four years enables the faculty to present to the students a more thorough and practical training in the practice of medicine than has heretofore been possible. The schedule of study is so arranged that the student reaches the practical work of his profession by gradual steps through theoretical and laboratory courses. There are also offered lectures upon subjects which have been omitted in previous years, because of lack of time.

FIRST YEAR.

History and methodology of medicine.
Medical terminology.
Medical botany.
Inorganic chemistry—laboratory.
Histology and embryology—laboratory.
Anatomy—bones, muscles and joints.
Physiology.
Homeopathic pharmacy.

SECOND YEAR.

Materia medica—experimental.
Organic chemistry—toxicology and urinalysis.
Anatomy, dissection.
Physiology—chemical and experimental.
Surgical emergencies and bandaging.
Hygiene and sanitary science.

THIRD YEAR.

Surgical anatomy.
Bacteriology, general pathology,
Materia medica and therapeutics.
Practice of medicine, organon and institutes of medicine.
Clinical medicine and physical diagnosis.
Obstetrics.
Principles and practice of surgery.
Diseases of women.
Ophthalmology.
Nose, throat and ear.
Clinics, medical and surgical
Medical jurisprudence.

FOURTH YEAR.

Surgical pathology.
Materia medica and therapeutics.
Practice of medicine.
Clinical medicine.
Mental and nervous diseases.
Dermatology and genito-urinary diseases.
Obstetrics.
Clinical obstetrics,
Principles and practice of surgery.
Ophthalmology.
Diseases of women—didactic and practical.
Orthopædic and clinical surgery.
Clinics, medical and surgical.
Paedology.
Electro therapeutics.
Life insurance examinations.

MATERIA MEDICA AND THERAPEUTICS.

The course upon this topic is graded to cover four year's study. Lectures, daily quizzes and daily demonstrations of materials and methods are held regularly throughout the year, pains being taken to fit each student for the actual practical application of his knowledge.

FIRST YEAR.

One lecture each week is given upon the methods of homeopathic pharmacy, each student being trained in writing and filling prescriptions and having demonstrated before him the more common preparations. Apparatus and material for these purposes are taken from Prof. Leonard's laboratory, which is abundantly supplied with the crude and perfected drugs for demonstration throughout the course. Mr. G. A. Babendrier, who has kindly given this instruction so satisfactorily for several years, will continue the same the coming year.

SECOND YEAR.

Lectures and quizzes twice each week upon the toxicological and physiological action of a few drugs, each typical of a class of remedies, thus furnishing the ground work for a more detailed study of symptoms in later years. As far as possible, actual experiments in testing drugs upon members of the class will be made, the blanks used and methods being under Prof. Leonard's personal supervision and in accordance with the rules of the Provers' Union of the American Institute of Homeopathy.

THIRD YEAR.

Three lectures a week with quizzes, upon the vegetable remedies, about thirty major and seventy-five minor drugs, all of the materia medica, arranged according to their natural groups and their clinical relationships in diseases, and studied in their origin, history, preparation, physiology and symptomology, full practical comparison being made with other allied remedies. The endeavor in these studies and those of the following year will be to present only such usage of drugs as is practical and fully corroborated, little, if any, time being spent upon their minor and less fully proven applications.

FOURTH YEAR.

Three lectures and quizzes each week upon the mineral, animal and nosological remedies of the materia medica—about forty major and twenty minor drugs, grouped and studied in detail as those of the second year, attention being given to their toxicology and physiological action, where this had a direct bearing upon their homeopathic application to chronic diseases, in as much as the drugs of this course are more often applied thereto.

Three lectures each week, two semesters, senior year.

Examinations in the form of written review quizzes from time to time or at the end of the term, will be held, the student's final standing being made up of this and his daily quiz markings.

THEORY AND PRACTICE.

Lectures on the theory and practice of medicine will be delivered to students of the third and fourth year. It will be the purpose to thoroughly acquaint the student with the description, course and diagnosis of disease, and the method of treating such disease in accordance with the homeopathic law of cure.

The cardinal principles of the philosophy of homeopathy will be clearly presented in didactic and clinical lectures. Students are familiarized with accurate methods of investigation, records of symptoms and history of cases, with the use of the repertory to assist in accurately affiliating the indicated remedy.

THIRD YEAR.

The course of the students of the third year consists of twenty-six didactic lectures, mainly on the diseases of the mouth, stomach and bowels. Eight lectures will be given on the philosophy of homeopathy. Frequent selections of cases from private practice will be given to better set forth the various lectures, as well as methods employed in the record of cases and selection of the remedy. One-half of the time allowed will be employed in frequent quizzes and review of the work gone over.

FOURTH YEAR.

The course to students of the fourth year consists of twenty-two didactic lectures on pulmonary and hepatic affections, with such of the important continued fevers as fall to this chair. The organon work will take the form of frequent "class-room talks," chiefly on the subjects of the following sections, viz: 242-274; 247; 245-251; 252-251; 167-168; 204-205.

In addition, students will be required to present written reports of the history and symptoms of cases treated, the repertory work in selecting the remedy, and dose, repetition and results. Much time and attention will be given to this feature of the course as tending in the highest manner to perfect the pupil in the art of *accurate prescribing*.

PHYSICAL DIAGNOSIS.

The course on physical diagnosis consists of a series of twenty-four didactic lectures to the third year class illustrated upon the healthy human subject, thus familiarzing the student with the normal appearances, feelings and sounds. These lectures are classified as follows: Introduction, general examination, respiratory system, circulatory system, digestive system, urinary system.

CLINICAL MEDICINE.

FOURTH YEAR CLASS.

For this course abundant material is found in the University homeopathic free dispensary, where clinics are held twice a week, and in the City Hospitals of Minneapolis and St. Paul, where the clinics are held each Monday morning.

In these clinics particular effort is made to supplement the course in physical diagnosis and to fully illustrate the application of the homeopathic law in therapeutics.

In order that the student may obtain as wide a view as possible in this all important branch, they receive instruction not only from Professor Ricker at the bedside in the City Hospital wards, but from the various members of the homeopathic staffs in the Twin Cities, attending the hospitals but not otherwise connected with the University.

In addition the dispensary furnishes many outside cases which are treated in their own homes by the members of the fourth year class, under the supervision of Professor Ricker, thus enabling the student to acquire the self-reliance and confidence so necessary to the beginning practitioner.

SURGERY.

Two years ago the work in surgery was greatly enlarged. It now occupies two full years, the third and fourth, and includes the labors of four members of the college faculty. The work is divided into clinical and didactic surgery.

CLINICAL SURGERY.

The work in clinical surgery will consist in operations before the class, in connection which clinical lectures will be given upon the cases presented. These will occupy each Monday of the fourth year, which is set apart as the day for clinics. The third year class is required to attend the clinics, unless their regular class work interferes. The second year students will receive thorough practical instruction in bandaging two hours each week, two semesters.

The diagnosis, prognosis and homeopathic treatment and the operations for surgical diseases and accidents will be taught practically.

At the clinics which are held at the City and County Hospital, St. Luke's and St. Joseph's Hospitals, of St. Paul, and the City Hospital and Free Dispensary, of Minneapolis, are demonstrated the value of antiseptic and aseptic treatment of wounds, the minute details of the application of surgical appliances and dressings, and operative technique. Post-operative care for reaction, shock, etc., will be considered.

Senior students are instructed in the practical use of anæsthetics and are required to attend a number of surgical patients at their homes, carrying out post-operative detail under the direction of the professor.

DIDACTIC COURSE.

The didactic course covers the entire field of the principles and practice of surgery The lectures will occupy the third year class two hours and the fourth year class three hours each week. Demonstrations will be made upon the cadaver, aided by models and charts.

The lectures to the third year class will include surgical pathology, inflammation, hemorrhage, surgical appliances, surgical emergencies, minor surgical operations, ligation of arteries, burns and scalds, surgical treatment of the anus and rectum, antiseptics, anæsthetics, abscesses, ulcers, gangrene, hernia and the elements of the treatment of wounds, fractures, dislocation and amputation.

The lectures of the fourth year class will include the surgery of the bones, joints, genito-urinary organs, tumors, cysts, fractures, dislocations, amputations, syphilis, together with the operative surgery of the head, face, chest, abdomen, pelvis, skin, nerves and extremeties.

All the lectures will aim to be comprehensive, practical and in keeping with the best standards of advanced surgery.

ORTHOPAEDIA.

The course on this subject is both didactic and clinical. It consists of one lecture a week during the fourth year.

The whole subject of deformities, their causes, care and removal, is carefully considered in detail. The mechanical apparatus used in the treatment of such cases is exhibited and rules are laid down for the improvising and applying temporary means and instruments. Recent progress in the knowledging of the underlying causes of bony, muscular and habit deformities, and their serious reflex effects,has led to great changes in the methods pursued to overcome them.

The early recognition and treatment of such cases are of the utmost importance and hence, as they are usually first presented to the general practioner, a full knowledge of this branch of surgery becomes exceedingly valuable.

The subjects discussed include functional and organic diseases of the bony spine, the several forms of club-foot, joint inflammations, both simple and tuberculous, and their sequelle, cleft-palate, hair-lip, etc.

OBSTETRICS.

This subject will be taught by lectures and recitations, thoroughly illustrated with charts, manikins and specimens. The course will be graded and divided between the third and fourth years.

During the third year the subjects covered will embrace the anatomy and physiology of the female generative organs and the pelvis, the development of the embryo, the maternal changes of pregnancy, the diagnosis of pregnancy, the physiology, pathology and hygiene of pregnancy, the physiology and course of normal labor, the conduct of normal labor and the management of the puerperium.

During the fourth year the following subjects will be taught: the mechanism of labor. diagnosis and management of the varions presentations, dystocia, complications of labor physiology, pathology and management of the puerperium, and obstetric surgery.

CLINICAL OBSTETRICS.

This department will instruct the fourth year students and apply practically the teachings of the department of obstetrics. An abundance of material is supplied by the dispensary and city hospitals of St. Paul and Minneapolis. The student will be thoroughly educated to locate accurately the position and condition of the internal parts both in health and disease, the obstetric points of the pelvis, as well as the diameters, planes and curves, the presentations, and positions of the child and methods of diagnosis, the stages and mechanism of labor, the management of normal and abnormal labors, the application of the forceps and the necessary steps in performing version.

Each member of the class will be assigned at least three cases of pregnancy which he will be required to attend under the immediate direction of the professor of the chair.

During the last month of the pregnancy of a case as assigned, the student in charge will report to the professor the patient's name, address, age, number of previous labors, date of first and last labors, date of quickening, condition of uterus, heart, lungs, bowels. kidneys, etc., and a detailed statement regarding the appearance of the patient, location of the foetal heart, position of the child, character and size of the pelvis.

At the time of the labor the student will be required to keep a record of the following facts:

No. of the case, date name, address, condition of the os uterus, height of presenting part, pulse rate and quality (ante and post partum), rapidity of foetal heart beats and where heard most clearly, presentation, position and duration of the first, second and third stage.

Also the sex of the child, the diameters of its head, weight and length. The post partum condition of the uterus, cervix and perineum.

An operative course on the female cadaver will also be given, demonstrating the operative technique in symphisiotomy and Cæsarean section.

DISEASES OF WOMEN.

This course will consist of one didactic lecture during the third and fourth year and two clinics a week during the fourth year.

In the third year, both semesters, the anatomy, physiology and pathology of the pelvic contents and perineum are carefully prescribed. The preparation of the patient for surgical operation together with the necessary steps taken, the various surgical procedures as well as the medical treatment of all pelvic diseases, will receive minute attention during both semesters of the fourth year.

The medical and surgical diseases of women will be treated in didactic lectures and recitations. The entire field of gynæcology will be covered in the lecture room. As cases present themselves in the city hospitals of St. Paul and Minneapolis, the subjects thus described will be demonstrated on the living subjects.

DISEASES OF CHILDREN.

The course on this subject will consist of one lecture each week and two clinics to the fourth year students, and extending over two semesters. Ths clinics are full and afford an exceptional opportunity to study the common diseases of childhood. In the out-door department many cases of exanthematous cases are treated by the members of the class.

The didatic course embraces a description of the normal development of infancy and childhood natural and artificial infant feeding, signs and symptoms of hereditary syphilis, contagious and infectious diseases, tuberculosis erysipelas, and the diseases of the respiratory and urinary organs; those of the circulatory, nervous and digestive systems, rhachitis and diseases of the skin.

MENTAL AND NERVOUS DISEASES.

This course consists of twenty-eight didactic lectures, in the fourth year, and as many clinical demonstaations as material is presented at the dispensary and the City Hospital, Minneapolis. It is the aim of the chair to qualify the student to detect the earliest symptoms of insanity and diseases of the nervous system.

The anatomy and physiology of the brain and spinal cord are reviewed, and particular attention is paid to the causes, development, characteristic symptoms and the pathological conditions of the diseases of the nervous spstem. The therapeutics, dietetics and direction for the personal care in each disease is especially elaborated.

ELECTRO-THERAPEUTICS.

This subject will be carefully taught. The physics of electricity will be sufficienty considered to enable the student to understand the construction and manipulation of galvanic faradic, sinusoidal and static batteries. The application of every form of electricity to diseases will be practically demonstrated.

OPHTHALMOLOGY.

In the department of ophthalmology the endeavor is to give thorough instruction in those parts of the work which will ordinarily come into the hands of the general practitioner.

The course is supplemented by as much practical work as time allows, in the use of the ophthalmoscope for the study of intraocular troubles whose recognition would aid in the diagnosis of various conditional affections; and following a short didactic course given early in the year on the subject, practical work in the correction of the refraction is carried on at the dispensary during both semesters.

The clinical material provided in the department is very abundant, interesting and instructive cases, embracing all varieties of eye troubles calling for medical and surgical aid being presented to the students bi-weekly throughout the entire year.

The following schedule shows the subjects considered in the present course of lectures.

Anatomy and physiology of the eye; refractions and use of the lenses for the correction of its errors; diseases of the lids; conjunctiva; cornea; sclera; lachrymal apparatus; iris and ciliary body; lens; choroid; retina and optic nerve; affections of the muscular apparatus of the eye and the general relationship between eye-strain and reflex and nervous disorders. The didactic course consists of thirty-two lectures during the fourth year and ten during the third year.

DISEASES OF THE NOSE, THROAT AND EAR.

The course will consist of the didactic lectures and clinical demonstrations.

One didactic lecture a week will be given to students of the third year. An understanding of the anatomy and physiology of the organs is presupposed and but little time will be devoted to the review of the more important points in their bearing upon diseases of these organs. The lectures will enter upon a study of the diseased processes in the nose—the various forms of acute and chronic catarrhal inflammation, their causes, development, symptoms, consequences and treatment, both general and local, abnormal growths, affections of the septum and diseases of the accessory sinuses, finishing the course on the nasal cavities with the neuroses, functional and organic.

The diseases of the naso-pharynx are treated with special reference to their dependence upon nasal conditions and their influence upon the organ of hearing. The course includes acute and chronic catarrhal processes adenoid vegetations and morbid growth.

Diseases of the pharynx are considered in their dependence upon alimentary disorders, acute and chronic inflammatory conditions; morbip growths and neurosis, together with the pharangeal and tonsilar conditions incident to the exanthemata, diphtheria, typhoid fever, etc.

In the laryngeal disorders we become more closely associated with respiratory diseases the various forms of laryngeal inflammation, morbid growths and nervous affections will be discussed—especial stress being put upon the early laryngeal manifestations of tuberculosis and the laryngeal disorders of voice users with the importance of proper vocalization and respiration upon all diseases of this organ.

Ear diseases resolve themselves into: Diseases of the external canal and pinna, dermoid inflammations; diseases of the middle ear, mucous inflammations; and diseases of the internal ear, serous and nerve inflammation.

The course to the fourth year students will be entirely clinical, the class being divided iuto sections for dispensary work; the aim will be to familiarize the students with the use of the various diagnostic means at their disposal, and the appearance of the various abnormal conditions, together with the technique of the numerous operative procedures. The material for clinical demonstrations is abundant.

SKIN AND GENITO-URINARY DISEASES.

This course will consist of one didactic lecture, and one clinic each week for students of the fourth year. It will include the disease of the skin, syphilis and all genito-urinary diseases, including the kidneys.

The first semester will be devoted to a study of genito-urinary and kidney diseases, the second to diseases of the skin and syphilis. The dispensary clinics will be especially valuable in supplementing the work of the professor in the lecture room by familiarizing the students with the appearance of the various forms of skin diseases so essential to a correct diagnosis of the same.

MEDICAL JURISPRUDENCE.

The object of this chair is to familiarize the student with his duties, rights and responsibilities from a legal standpoint. The law on each subject discussed is carefully explained and illustrated, as far as possible, with adjudicated cases.

HISTORY AND METHODOLOGY OF MEDICINE.

The lectures given in this chair are an exposition of the philosophy and art of medicine by the historical method. The student is taught to see how in each age the *practice* of medicine has been the outgrowth of the beliefs current regarding the nature of man. Give to a student the theories held by a people regarding the constitution of matter, the nature of mind and force, and he can accurately foresee the medical science such a people will accept. The unfolding of the world's thought in medicine sets homeopathy in its high place and gives the student an outlook much needed in the profession. The tendency of medicine has always been to over-estimate the material side of man's nature and to make innumerable hypotheses to explain disease. The conflicts in medicine have been the clashing, not of opposite sects, but of antagonistic systems of thought, and reconciliation is possible only on the grounds of a higher science than that of mere sense knowledge. This ground is revealed in the history of the philosophy of medicine.

The course includes the medicine of the Egyptians, Persians, Indochinese, Hebrews, Greeks, Arabians and of Europe down to the present.

One lecture each week during the freshman year.

LIFE INSURANCE EXAMINATION.

This subject will be taught with the purpose of familarizing the student with all the duties and responsibitities belonging to the position of medical examiner.

HISTOLOGY AND EMBRYOLOGY.

The laboratory of histology and embryology occupies most of the first floor and portions of the third floor and basement of the laboratory of medical sciences.

The general laboratory, 44x72 feet, extends across the north wing and is abundantly lighted by large windows on three sides and part of the fourth. Study tables accommodating seventy students are placed directly under the windows. A second tier of desks provides for twenty other students. Each student is provided with a separate locker for the storage of apparatus and material. The special laboratory, 24x35 feet, for research work by advanced students, adjoins the general laboratory. The next apartment, the library of the laboratory, contains a reference library consisting of a small but carefully selected collection of related literature, both standard and periodical. In addition to the laboratory library, the other libraries of the University, together with the public libraries of Minneapolis and St. Paul, afford the student access to the best publications among current periodicals and monographs. The rooms across the hall are devoted to the office and private laboratories of the professor and his assistant. On the third floor are located a preparation room, a small laboratory for special students, a dark room, a room for copying and enlarging, and a laboratory for photomicrography and projection. In the museum on this floor are several cases containg series of embryos and histologic specimens. In the well-lighted basement are found a preparation room, 20x35 feet, for the hardening of tissues, &c., and an experimental laboratory and store room, 26x36 feet.

These laboratories are equipped with seventy-five Leitz' microscopes, each fitted with nosepiece and Abbé condenser, various forms of microtomes, such as freezing, Thoma, Minot, Schanze, &c., injection apparatus, aquaria, thermostats, incubators, water baths, chemical hoods, a great variety of technical glassware, Grübler's stains, a set of His' wax models, photomicrographic and reconstruction apparatus, charts, reference cabinets containing carefully selected slides, a large collection of hardened histological and embryological material with an abundant supply of fresh tissues.

The courses are made as practical as possible, beginning with the technique of the microscope, followed by the preparation of permanent specimens. Collections of typical specimens, also, will be loaned to the students for study. During the two years course the student will acquire a valuable collection of slides of his own preparation illustrating the structure and development of the human body.

The course is illustrated by charts and lantern-slides of histological and embryological specimens. Demonstrations are given under the microscope of typical sections of tissues and organs, accompanied by camera lucida drawings, or photo-micrographs, with explanatory text.

All students are recommended to purchase a microscope at the beginning of their medical course. This instrument is an indispensable part of the outfit of a well-trained physician. Suitable microscopes can be purchased at from $50 to $60, which may be fitted at any time with such other parts as may be desired.

Students not owning microscopes will be furnished with instruments at a rental of $2 per semester for each course requiring the use a microscope.

Course I. General morphology and histology.

Lectures, demonstrations and laboratory work. The course includes the structure and manipulation of the microscope, the structure and properties of protoplasm; the cell, its structure; cell division and reproduction, A detailed study of the structure and life history of certain typical unicellar animal and plant forms and of certain multicellar forms, leading to the consideration of the elements of structure in the vertebrata. A comparative study of the histology of the blood, of the epithelial, connective, muscular and nervous tissues and of the vascular and lymphatic systems. Lectures, etc.. 2 hours a week. Laboratory work, 6 hours a week, 1st semester, 1st year.

Professors Lee and Nickerson and M. L. Nickerson.

Course II. Elements of embryology and histogenesis.

Lectures, demonstrations and laboratory work. A comparative study of reproduction; the ovum, the spermatozoon, fertilization, cleavage, formation of blastodermic layers, the formation of the embryo, foetal envelopes, etc., with practical work on chick, frog and mammalian embryos. The differentiation and histogenesis of the tissues, etc. Lectures, etc., 2 hours a week; laboratory work, 6 hours a week, 2d semester, 1st year. Open to those who have completed course i.

Professors Lee and Nickerson and M. L. Nickerson.

Course III. Human embryology and microscopic anatomy.

Lectures, demonstrations and laboratory work. Advanced methods of histological and embryological technique, with practical laboratory work. The comparative study of the morphology, microscopic anatomy, origin and development of the various organs of the integumentary, alimentary, respiratory and uro-genital systems, the central and sympathetic nervous systems, the organs of special sense, etc. Lectures, etc., 2 hours a week; laboratory work, 3 hours a week. 1st and 2d semesters, 2d year. Open to those who have completed the courses of 1st year in histology and embryology.

Professors Lee and Nickerson and M. L. Nickerson.

The full courses given in histology and embryology of vertebrates in the college of science, literature and the arts will be accepted in lieu of the first year's work in histology and embryology, in the department of medicine. See statement of fees, page 18.

The following courses are open to properly qualified students, and will consist of practical work in the laboratory, a prescribed course of reading, with reports of work, and of lectures and demonstrations to be given from time to time.

Course IV. Methods of microscopical work.

The preparation and use of the various solutions employed in fixing, hardening and staining; methods of embedding, sectioning, reconstruction, etc.

Course V. (*a*) *Comparative histology and histogenesis of tissues.*

The animal cell, the epithelial, connective, muscular and nervous tissues, blood, etc.

(*b*) *Comparative histology and embryology of the viscera.* The epidermal, digestive, respiratory and uro-genital systems of organs.

(*c*) *Comparative histology and histogenesis of the nervous system and sense organs.* Central nervous system, etc., after the methods of Weigert, Golgi, etc.

Course VI. Comparative embryology of vertebrates.

A detailed study of the various stages in the development of vertebrate types, as acanthias, petromyzon, trout, amblystoma, frog, chick, rat, pig and human embryos.

Research work in histology and embryology.

Opportunity will be offered for those desiring to pursue original investigations.

ANATOMY.

The department of anatomy occupies a separate building, adapted to its work and equipped with the best modern appliances. It includes two large students' dissecting rooms, the general laboratories of anatomy, a bone laboratory for bone research work, the offices of the professor and demonstrator of anatomy, preparation rooms and morgue. An ample supply of dissecting material is provided.

The bones of the human skeleton are furnished to the student for purposes of study and recitations from the specimen are conducted by the demonstrator of anatomy.

A series of lectures upon syndesmology follows, accompanied by recitations, which are illustrated by human preparations and by fresh and preserved sections of joints.

A course of descriptive lectures in myology is then given, with demonstrations upon the cadaver.

Lectures and a brief course of dissections of the abdominal and thoracic viscera of the lower animal complete the work of the first year in this branch.

In the second year, the student takes lectures, recitations and demonstrations upon the vascular system, the alimentary canal, the respiratory tract, the genito-urinary system and the inguinal and perineal structures. He then pursues a course in regional anatomy, embracing a study of the surgical regions of the entire body; a course in the anatomy of the eye and ear and of the brain, spinal cord and ganglionic system, illustrated by fresh and permanent preparations, models and diagrams.

He dissects, during the year, the entire human body, recites upon the subject and observes demonstrations made by a corps of assistants under the direction of the demonstrator of anatomy.

In the third year, the student takes up the study of the human body from a topographical standpoint and is given a thorough review of the surgical regions, emphasizing the practical points in the relations, structure and distribution of the nervous system.

Course I. Osteology.

Lectures and recitations upon the human skeleton and supplementary work on the osteology of domestic mammals; three hours each week, for 10 weeks of first semester. Practical study of the skeleton, followed by recitations from the specimen, taken by the class, in sections; 2 hours each section, for 10 weeks, first semester. Required of all first year students.

Course II. Syndesmology.

Lectures, recitations and laboratory demonstrations. 3 hours each week, for 4 weeks, first semester. Open to those who have taken course i.

Course III. Myology and Angiology.

Lectures and recitations, covering the entire muscular and arterial systems of the human body, with a supplementary study of comparative myology; 3 hours each week, 16 weeks. Laboratory work consists in identifying the muscles of the human body on dissected preparations and showing their actions. Class. in sections, 4 hours each week, for 5 weeks. Open to those who have taken course ii.

Course IV. Splanchnology.

Lectures on the thoracic, abdominal and pelvic viscera; 2 hours each week, for 10 weeks. Open to those who have taken course iii. Laboratory work in demonstrating and dissecting the thoracic, abdominal and pelvic organs of the human subject or of the dog or sheep. PROFESSOR ERDMANN.

Semi-weekly recitations upon the subjects of the first year's course, conducted in sections. DR. H. K. READ.

Course V. Splanchnology.

Descriptive and topographical anatomy of the thoracic viscera, the alimentary and urino-genital organs. Lectures and recitations, 3 hours each week, for 10 weeks. Required of second year students.

Course VI. Descriptive and surgical anatomy.

Head, neck, trunk and extremities. Lectures and recitations, 3 hours each week, for 12 weeks, Open to those who have completed course v.

Course VII. The nervous system.

Cerebro-spinal axis and its membranes; the cranial and spinal nerves; the sympathetic nervous system and the special-sense organs. Lectures and recitations, 3 hours each week, for 8 weeks. Open to those who have completed course vi.

PROFESSOR ERDMANN.

Course VIII. Dissections.

This work extends over two periods of 6 weeks each, requiring five afternoons of each week. The method of work follows that laid down in Holden's Manual of Dissections. DR. H. K. READ.

The second year lecture and dissecting courses are open to those having completed the first year's work in anatomy and histology.

Weekly recitations, upon the subjects of the second years' course conducted in sections. PROFESSOR ERDMANN.

Course IX. Surgical anatomy.

The instruction consists of dissections, demonstrating the relations of structures composing the surgical regions of the body; demonstrations, upon the living subject, showing the anatomical and surgical landmarks and their applications; also the location, by surface tracings, of the viscera contained in the various cavities and of the important arteries, veins and nerves. 1 hour a week, second semester. Required of third year students. PROFESSOR ERDMANN.

Course X. Applied Anatomy of the nervous system.

Elective.

Opportunity is afforded for advanced work in practical anatomy at any time during the college year.

PHYSIOLOGY.

The department of physiology occupies a suite of rooms in the laboratory of medical sciences, including the laboratory of experimental physiology, the laboratory of physiologic chemistry and practical dietetics, a demonstration and recitation room, the laboratory library and the office of the professor in this branch. A large amphitheater, adapted to the demonstration of major experiments, immediately adjoins the physiologic laboratories and is used, also, for lecture purposes by this and other chairs.

In the basement of the laboratory of medical sciences, the chair maintains large and well-equipped animal-rooms, which are furnished with a large aquarium, frog tanks, animal enclosures and breeding cages. From this animal room are furnished supplies of material and animals for the work in experimental physiology, physiologic chemistry, histology, embryology, pathology and bacteriology. The hygienic conditions of the room are studied carefully, with a view to maintaining the physiologic and structural integrity of its animal occupants as perfectly as possible. Stock required for bacteriological purposes is removed and placed in an isolated department at a distance from the room.

The physiologic laboratories are equipped with a full supply of apparatus, instruments etc., for experimental purposes, and with materials, glassware, digesters, water baths, ventilating hoods, etc., for the work in physiologic chemistry. Their outfit includes sets of vivisection instruments, an artificial respiratory machine, batteries; Du Bois-Reymond coils, galvanometers, rheostats, moist muscle chambers, recording drums, Ludwig's kymograph, spring myograph, Burdon-Sanderson's stethometer, stethoscopes, phonendoscopes, Dudgeon's and Marey's sphygmographs, Runne's chronograph, Roy's tonometer, Gaskell's clamp, oncometers, hæmometers, hæmoglobinometers, hæmatocrits, plethysmograph, etc., etc. They are furnished with motor power for the operation of recording apparatus and for the manufacture of apparatus in the laboratory workshop.

The course in physiology is graded in the first and second years. In the first year, the student hears lectures, recites and attends demonstrations in general physiology. These embrace the discussion and, so far as possible, the observation of the physiologic ingredients of the animal body; the study of the physiology of cell-life, of the fundamental properties of the cell; of the nutritive media, blood, lymph and chyle; of the elementary functions of the nervous system; of the muscular tissues, the connective tissues and the epithelial tissues; of the vascular mechanism; of the alimentary canal; of the organs of secretion, respiration and excretion.

In the second year, the work is made as practical as possible and includes the study of such advanced topics as metabolism, nutrition, dietetics, reproduction; the physiology of foetal life, of infancy, of maturity and of old age; and the functions of the brain, spinal cord and ganglionic system. Three hours each week, during the first semester, are occupied in laboratory work in physiologic chemistry. This course affords the student a practical knowledge of the tissues and fluids of the body from a chemical standpoint. It embraces studies in the several classes of proteids, in fats, carbohydrates, bone, muscle, blood, milk, the digestive fluids, glycogen, etc.

A similar number of hours during the second semester are devoted to experimental physiology. For this work the class is divided into sections and the instruction is individualized so far as possible. The student is familarized with physiologic apparatus and its uses; with forms of electrical stimulation and with methods of experimentation; while his knowledge of physiologic principles is strengthened by the observation of functional facts. Demonstrative work is combined with the individual experiments performed by the pupil.

In the fourth year, an elective course in practical dietetics is conducted during the first semester. It deals with the analysis of foods, with the general principles of food preparation and with the selection of a suitable dietary for the several periods of life.

Practical talks upon the principles and means of food preparation, the serving of food, food selection, invalid and infant dietary, etc., are associated with this course. A trained instructor conducts the exercises in hygienic cooking.

A laboratory reference library is in process of collection, to which the advanced student will have access for collateral reading.

Course I. General physiology.

Lectures, recitations and demonstrations, dealing with the physiologic chemistry of the human body; the physiologic properties of the cell; the nutritive media; the nervous mechanisms in general; the muscular tissues, the connective tissues and the epithelial tissues, as the structural bases of the animal body. Two hours a week, first semester, first year. PROFESSOR BEARD.

Course II. Systemic physiology.

Lectures, recitations and demonstrations. This course includes the physiology of the vascular system; the digestive system; the respiratory system; the secretory and excretory systems. Four hours a week, second semester, first year. Open to those who have completed course i. PROFESSOR BEARD.

Semi-weekly recitations upon the subjects of the first year are conducted in sections of the class. PROFESSOR BEARD AND DR. M. R WILCOX.

Course III. Advanced physiology.

Lectures, recitations and demonstrations. The course includes the discussion of the phenomena of metabolism; of nutrition; of temperature production, regula-

tion and loss; of reproduction; of the physiologic changes incident to successive periods of life, and of the functions of the nervous system. Two hours a week, first semester; three hours a week, second semester, second year. Open to those who have completed the courses in physiology of the first year. PROFESSOR BEARD.

Semi-weekly recitations upon the subjects of this course are conducted in sections of the class. PROFESSOR BEARD AND DR. WILCOX,

Course IV. Physiologic chemistry and microscopy.

Laboratory work. A practical study of the several classes of proteids; of carbohydrates, fats, muscle and bone; of gastric juice, saliva, pancreatic juice and bile in their respective digestions; of glycogen, and of blood, lymph, chyle and milk. Microscopic study of the carbohydrates in vegetable and animal forms; of the physiologic emulsions of fat; of the crystalline waste products; and of the physiologic conditions of the blood-cells and the process of fibrin formation. Practical instruction is given during this course in the enumeration of the blood cells, in the estimation of hæmoglobin and of the corpuscles in mass, in the spectroscopic examination of the blood and in the use of the polariscope. Nine hours a week, first semester, second year. This does not represent the actual number of hours of work done by each student, since, during a part of the session, the class is divided into sections for practical exercises. Open to those who have completed courses i and ii. PROFESSOR BEARD AND DR. WILCOX.

Course V. Experimental physiology.

Laboratory work and demonstrations. A study of physiologic apparatus, electrical stimuli and methods of experimentation; the demonstration of experiments which illustrate physiologic function in the muscular, nervous, vascular, respiratory and glandular systems. Three hours a week, second semester, second year. Open to those who have completed course iv. PROF. BEARD AND DR. WILCOX.

Course VI. Practical dietetics. (Elective.)

Lectures and laboratory exercises. A study of food analysis, food preparation and of the general principles of food selection, including a discussion of invalid and infant dietary. Two hours a week, first semester, fourth year.

PROFESSOR BEARD AND MISS WILKINSON.

Opportunity will be afforded, in the laboratories of physiology and physiologic chemistry, for the pursuit of special courses of study, in both experimental and chemical physiology, under the direction of the chair.

Full courses in animal biology in the college of science, literature and the arts will be accepted in lieu of first year physiology in the department of medicine.

See statement of fees, page 18.

CHEMISTRY.

The work in this subfect is carried on in a building especially arranged for this work. The qualitative laboratory has a floor space of about 2300 square feet and accomodates 100 students at a time. It is used for instruction in general chemistry and analysis. It is well supplied with the usual apparatus. The quantitative laboratory has a floor space of about 1500 feet, and accomodates 68 students at one time. It is used for instruction in the analysis of the urine, quantitative analysis and organic chemistry. The chemical lecture room is situated in Medical Hall.

Course I. General inorganic chemistry, including qualitative analysis.

Lectures and recitations. 3 hours a week, first semester; 2 hours a week, second semester, first year. PROFESSOR BELL.

Laboratory work; qualitative analysis. 6 hours a week, first year, from October 1st to May 8th. PROFESSORS BELL AND CAREL

Course II. Analysis of the urine; toxicology: chemistry of carbon compounds.

Lectures and recitations. 1 hour a week, first semester; 2 hours a week, second semester, second year. PROFESSOR BELL.

Laboratory work; analysis of the urine. 6 hours a week, second year, from October 1st to January 1st. PROFESSORS BELL AND CAREL.

Courses I, II and III in chemistry, in the school of technical and applied chemistry, are accepted in place of first year chemistry in the department of medicine.

See statement of fees, page 18.

An optional course in experimental work is given during the second semester of the second year.

It includes work in toxicology, water analysis, food analysis, and the preparation of carbon compounds, according to the wishes and needs of the individual student.

No charge is made except for apparatus destroyed.

Chemistry.

Second year—

Tyson's Examination of Urine.

Reese's Toxicology.

PATHOLOGY AND BACTERIOLOGY.

The laboratories of pathology and bacteriology occupy spacious quarters in the laboratory of medical sciences. A general laboratory, 44x70 feet, is well lighted by windows on three sides and part of the fourth. Electric light for microscopic and general illuminating purposes is also provided. The arrangement is such that three students are grouped so as to have a sink, with gas, water and waste connection, and ample desk space next the windows. Eight lockers, arranged beneath the table and on the walls, provide for apparatus, microscopes, etc., and are given at the beginning of the course to each student. Immediately behind and accessible to each student, are sterilizers, incubators, blow-pipes, etc. Cupboards, drawers, a large incubator, sinks, fume chambers, demonstration and distribution tables, complete the arrangement of the room.

Two private rooms of the demonstrators flank it on either side. Adjoining one of these are the department library and the office and private laboratory of the professor of pathology and bacteriology. Adjoining this is the private laboratory of the professor of surgical and clinical pathology. Specimens illustrative of surgical pathology are here prepared and diagnostic work done.

In the basement of the building, the department has store rooms and a room where pathological animals are housed. Here too are equipped laboratories for bacteriology and experimental pathology, as well as a room in which all the culture media are made.

In the third story, immediately above and of the same size as the large laboratory, is a museum for the storage and exhibition of pathological specimens, while a preparation room for their reception and assorting adjoins it.

The hospitals of Minneapolis and St. Paul afford a large supply of material and frequent opportunities for post-mortem examinations.

MICROSCOPES.

An adequate equipment of microscopes with attachments, immersion lenses, etc., permits of the rental of an instrument to each student, at a cost of $2.00 per semester, whenever he is unprovided with one suitable for his purposes.

Course I. (*a*) *Bacteriology.*

Lectures and demonstrations. This subject will be treated not only from the aspect of pathology, but in its relation to hygiene and public health. The general scope of bacteriology, the classification of the various bacterial forms, the composition and manufacture of culture media, the methods of isolation and culture, the testing of various bactericidal materials, conditions, etc., will be studied until a thorough knowledge of technique is acquired, (so far as may be possible with non-pathogenic bacteria). The special study and comparison of the various pathogenic micro-organisms will then be systematically taken up. 2 hours per week, first semester, third year.

PROFESSOR WESBROOK, DR. WILSON AND DR. WHITE

(*b*) *Bacteriology.* Laboratory work, teaching the general principles of and familiarization with the making of culture media, the methods of culture isolation and the microscopic examination of stained and living bacteria, the testing of various antiseptics, etc.

The student will be required to grow in the various media, for macroscopic and microscopic examination, all the important pathogenic bacteria, such as the pyogenic bacteria, B. anthracis, B. typhi abdominalis, B. coli communis, Vibro choleræ, B. Diphtheriae, B. tuberculosis, etc. Materials and tissues from men and animals, containing these and other bacteria, will be provided for diagnosis and the isolation of the bacteria in pure culture, where practicable. Parallel study of micro-organisms which might be mistaken for these, will also be pursued. Bacteriological diagnosis, in its relation to clinical diagnosis and public health, will be especially dwelt upon. 9 hours a week, for the first twelve weeks of the first semester, third year. PROFESSOR WESBROOK, DR. WHITE AND DR. WILSON.

Course II. (*a*) *General pathology.*

Lectures, demonstrations and laboratory work on the general processes involved in disease. Bacteriology and its etiological relation is taught concurrently (see above). The general considerations of tumors will be omitted, since it is fully dealt with in the course on surgical pathology and special pathology. 2 hours a week, first semester, third year.

(*b*) *General pathology.*

Laboratory work, particularly on the history of inflammation, (largely experimental) degenerations, etc. Nine hours a week for four weeks at the end of first semester, third year. PROFESSOR WESBROOK AND DR. WHITE.

Course III (*a*) *Special pathology.*

Lectures and demonstrations. The special study of the pathological processes occurring in the blood, vascular and lymphatic systems, lungs, liver, kidneys, alimentary canal, etc., will be taught by the demonstrations of fresh tissues and preserved specimens from the pathological museum. Three hours a week, second semester, third year. PROFESSOR WESBROOK AND DR. WHITE.

(*b*) *Special pathology.* Practical laboratory work, in which the students will be required to mount and examine, under the microscope, selected, fresh and stained specimens of morbid tissues, fluids, etc. The microscopic and chemical study of such materials as pathological blood, sputum, urine, contents of alimentary canal, etc., and the application of laboratory methods to clinical diagnosis will form an important part of this work and will be taken up at the completion of the study of the morbid condition in each organ or system. The animal parasites will also receive attention. The histology of the various tumors will be fully given and students will be provided with specimens for staining, mounting and examination. Nine hours a week, second semester, third year.

PROFESSOR WESBROOK, DR. WHITE, DR. HEAD, DR. WILSON AND MR. HUXLEY.

(*c*) *Special pathology.* Autopsis and post-mortem technique. Students will have an opportunity of personally taking part in this work, under the direction of the pathologist in charge, in the hospitals of Minneapolis and St. Paul. A knowledge of the technique of post-mortem work and of morbid anatomy will be thus afforded. Throughout the third and fourth years.

PROFESSOR STEWART, DR. ROTHROCK AND DR. WHITE.

TEXT-BOOKS AND COLLATERAL READING.

The following text-books are preferred by the faculty. Reference works are suggested, also, for collateral reading:

Medical dictionaries;

Gould's Medical Dictionary.
Dunglison's Medical Dictionary.
Duane's Medical Dictionary.

Histology.

First year—

Wilson's The Cell.
Piersol's Histology.
Stöhrs Histology.
Quain's Anatomy, 10th Ed. Vol. I, Pt. II.
Schæfer's Histology.
Parker's Biology.

Second year.

Piersol's Histology.
Quain's Anatomy, Vol. III, Pts. I, III and IV.

Collateral reading—Kölliker's Gewebelehre Pts, I and II; Duval's Précis d' Histologie; Ranvier's Traite d' Histologie; Böhm u Davidoff's Histologie; Beiren's Kossel u Schiefferdecker's Gewebelehre; Klein's Histology; O. Hertwig's The Cell; Lee's Microtomist's Vade Mecum; Stirling's Practical Histology; Willey's Amphioxus, etc.; Thomson's Zoölogy; Huxley & Martin's Biology; Davenport's Experimental Morphology.

Embryology.

Minot's Embryology.
Hertwig—Mark's Embryology.
Marshall's Vertebrate Embryology.

Collateral reading—Kölliker's Enlwicklungsgeschichte; Prenant's Embryologie. Schenk's Embryologie; O. Schultze's Embryologie.

Anatomy.

First year—

Quain's Anatomy, 10th edition, Vol. II, Pts. I and II.
Gray's Descriptive and Surgical Anatomy.
Gerrish's Anatomy.

Second and third years—

Quain's Anatomy, 10th edition.
Morris' Text-Book of Anatomy.
Gerrish's Anatomy.
Gray's Anatomy.
Holden's Practical Anatomy.
Erdmann's Manual of Dissections of the Human Body.
Weiss' Practical Anatomy.
Hayne's Manual of Anatomy.
Owen's Manual of Anatomy.
Holden's Manual of Dissections.
Treve's Applied Anatomy.

Collateral reading—Flower's Osteology of Mammals; Gegenbauer's Elements of Comparative Anatomy; Chauveau's Comparative Anatomy; McClellan's Regional Anatomy; Ranney's Applied Anatomy of the Nervous System; Meynert's Psychiatry. Part I: anatomy, physiology and chemistry of the brain.

Physiology.

First and second years—

Foster's Physiology, sixth edition.
Howell's American Text-Book of Physiology.
Stirling's Practical Physiology.
Waller's Human Physiology.

Collateral reading—Landois and Stirling's Handbook of Physiology; Chapman's Physiology; Stewart's Practical Physiology; Yeo's Physiology; Blyth's Foods.

Chemistry.

Second year.

Tyson's Examination of Urine.
Reese's Toxicology.

Materia medica and therapeutics.

First year—

Pharmacopœa of the American Institute of Homeopathy.

Second year—

Hughes' Pharmaco-Dynamics.

Third and fourth years.

Farrington's or Cowperwaite's Materia Medica, Hahnemann's Organon.

Reference books—Third and fourth years—Allen's Hand Book, Herring's Condensed Materia Medica, Dunham's Lectures.

Pathology.

Ziegler's General and Special Pathology.
Stengel's Text-book of Pathology.
Coat's Manual of Pathology.
Mallory and Wright's Pathology.

Collateral reading—Hamilton's Text-book of Pathology; Delafield and Pruddens' Handbook of Pathological Anatomy and Histology; Woodhead's Practical Pathology; von Kahlden's Pathological Histology; Thoma's Text-book of General Pathology; Lubarsch Ostertag, Ergebnisse der Pathologie u Anatomie, Orth, Pathologische Anatomie; Birch-Hirschfield, Pathologische Anatomie; Clifford Allbutt's System of Medicine, Vol. I: Leuchart's die Thierische Parasiten des Menschen. Bouchard, Traite de Pathologie Generals.

Clinical Microscopy.

Von Jaksch's Clinical Diagnosis.
Simon's Clinical Diagnosis.
Cabot's Clinical Examination of the Blood.
Cabot's Serum Diagnosis of Disease.

Collateral reading—Lenhartz Mikroscopie u Chemie am Krankenbett; von Limbeck Klinische Pathologie der Blutes.

Bacteriology.

Muir and Richie's Manual of Bacteriology.
Abbott's Principles of Bacteriology.
Abbott, The Hygiene of Transmissible Diseases.
Park, Bacteriology in Medicine and Surgery.

Collateral reading—Sternberg's Manual of Bacteriology: Fraenkel's Bacteriology; Woodhead's Bacteria and their products; Duflocq, Lecons sur les Bacteries Pathogenes; Flügge, die Mikroorganismen; Lehmann and Neumann, Atlas u Grunnriss d, Bakteriologue u Lehrbuch d, spec. Bakteriolog, Diagnostik; Migula, System de Bakterien; Duclaux, Traité de Microbiologie.

Practice of Medicine.

Goodno's Practice.
Raue Therapeutics.
Lippe's Repertory.
Knerr's Repertory.
Pepper's System of Medicine.
DaCosta's Diagnosis.

Physical Diagnosis.

Lilienthal's Therapeutics.
Lippe's Repertory.
Farrington's Clinical Materia Medica.
Vierodt's Medical Diagnosis.
Abrams' Manual of Clinical Diagnosis
DaCosta's Diagnosis.

Surgery.

Park's Surgery.
Homeopathic Text-book of Surgery.
Moulin's American Text-book of Surgery.
Bradford & Lovett, Orthopaedic Surgery.
Pye's Surgical Handicraft.

Skin and Genito-urinary Diseases.

Skin—Kippax, Hyde, Pye-Smith.
Genito-Urinary—Doughty, Carlton.

Obstetrics.

Leavitt.
Lusk's Midwifery.
American Text-book of Obstetrics.
American System of Obstetrics.
Grandin & Jarman's Midwifery.
Playfair's Midwifery.
Boisliniere, Obstetric Accidents, etc.
Davis' Obstetrics.

Gynecology.

Wood, Text-book of Gynecology.

Ophthalmology.

Norton, Buffum, Swanzy, Noyes.
Collateral reading—Fuch's Diseases of the Eye.

Otology and Rhinology.

McBride, Burnett, Ivins, McDonald. Bosworth, Barr, Nehslage and Hallett.

Nervous and mental diseases.

Worster on Insanity.
Clouston Mental Diseases.
Edinger's Anatomy of Central Nervous System.
Martin's Nervous Diseases.
Dana Text-book Nervous Diseases.
Bigelows' System of Electro-therapeutics.
Mill's, The Nervous System and its Diseases.
Collateral Reading—Hack Tuke's Dictionary of Psychological Medicine; Bevan Lewis' Mental Diseses; Kirchoff's Handbook of Insanity; Ferrier's Localizations of Cerebral Diseases; Strumpell's Text-book of Medicine; Hirt's Diseases of the Nervous System; Horsley's Brain and Spinal Cord.

Diseases of children.

Tooker's Diseases of Children.
Holt's Diseases of Children.
Fisher's American Text-book of Diseases of Children.
Collateral reading—Cyclopedia of Diseases of Children.

Hygiene.

Coplin and Bevan's Practical Hygiene.
Park's Hygiene.
Collateral reading—Richardson's Preventative Medicine; Buck's Hygiene and Public Health.

Medical jurisprudence.

Taylor's Medical Jurisprudence.
Chapman's Medical Jurisprudence.
Collateral reading—Hamilton's American System of Legal Medicine; Withaus' and Becker's Medical Jurisprudence and Toxicology; Wharton and Stille's Medical Jurisprudence.

All communications pertaining to the college of homeopathic medicine and surgery should be addressed to the Dean, A. P. Williamson, M. D., No. 602 Nicollet Avenue, Minneapolis, Minn.

COLLEGE OF HOMEOPATHIC MEDICINE AND SURGERY.

SENIOR CLASS—7.

Bertelson, Oscar Leonard, Fergus Falls.
Gramenz, Ferdinond, Posen, Germany.
Ketting, Herman August, Cottage Grove.
—Hurd, Annah, Minneapolis.
Lares, Bert Victor, Minneapolis.
Leck, Clifford Cleon, Owatonna.
Smith, Edwin Harwood, Minneapolis.

JUNIOR CLASS—5.

Bickford, Harley Gray, Maine.
Mitchell, Roy E., Porter Mills, Wis.
Musgrave, George James, Farmington, Ia.
Sutton, Harry E., Minneapolis.
Tunstead, Hugh John, Minneapolis.

SOPHOMORE CLASS—5.

Cole, Carl Vincent, Minneapolis.
Hall, Earl L., Eau Claire, Wis.
Rogers, Fred Drake, St. Paul.
Smith, Norman Marshall, Monticello, Ia.
Warner., Eugene Frederick, St. Paul.

FRESHMAN CLASS—7.

Dawson, Charles Arthur, Minneapolis.
Gray, Clyde Edward, Minneapolis.
Holmes, Charles Franklin, Aberdeeen, S. D.
Mitchell, Walton Inngerich, St. Paul.
Newkirk, Harris Dana, Minneapolis.
Pond, Irving Judson, Minneapolis.
Whittemore, J. Gooch, Glenwood.

Laboratory of Medical Sciences.